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Jean Marie Shelton

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PROFESSIONAL NURSE CASE MANAGER INTERVENTIONS

IN PATIENT CARE

by

Jean Marie Shelton

A Thesis Submitted to the Faculty of the

COLLEGE OF NURSING

In Partial Fulfillment of the Requirements
For the Degree of

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DEDICATION

This thesis is dedicated to my mother, Jennie, and to the memory of my father, John, from whom I learned to persevere.

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ABSTRACT

Research to support the practice of nursing case management is limited. Systematic study in the areas of nursing case management structure, process, and outcomes is necessary to guide the future of this practice.

The purpose of this study was to systematically analyze the body of periodical literature relating to hospital-based nursing case management to identify what interventions the nurse case manager implemented in this practice setting. A content analysis methodology was utilized to describe nurse case manager interventions in thirty sample documents published between 1990 and 1995. Forty-one different nursing case management interventions were identified and coded utilizing the Nursing Interventions Classification (NIC) taxonomy. Nine common interventions were found in at least 33-percent of the hospital settings. They included: Critical Path Development, Surveillance, Admission Care, Health Care Information Exchange, Quality Monitoring, Discharge Planning, Teaching, Referral, and Physician Support. Research is needed to validate these findings as core interventions.

CHAPTER 1

INTRODUCTION

In this chapter, case management and nursing case management are introduced. Then a problem within the field of nursing case management is described. The purpose of the study and research questions related to this problem are identified.

Statement of the Problem

The appearance of over one thousand articles in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) since 1990 attests to the growing popularity of case management in health care. Case management consists of patient-focused strategies to coordinate care while balancing process, outcome, and costs (Bower, 1992). The primary goals of case management are patient focused. These goals include enhancing the individual's quality of life, maximizing the patient's self-care ability, and receiving quality care in all settings. Other goals are more system focused. Reduced fragmentation of care across multiple settings, efficient use of resources, and cost containment all represent system focused goals (Bower; Hicks,

Stallmeyer, & Coleman, 1993). Nursing is one of several

disciplines that provides case management services. Case

managers may also be social workers, physicians,

occupational therapists, and others (Case Management Society

of America, 1995; Brault & Kissinger, 1991). To attain case

management goals, each discipline employs strategies or

interventions that are unique to their knowledge base and

skill set. Newell (1996) describes a ''practice model'' of

case management that encompasses case manager strategies

that revolve around the patient and family. In order to

perform these strategies the case manager must possess a

skill set that includes: caring, clinical expertise,

coaching, care coordination, communication, systems theory

training, negotiation, reporting, and evaluation (Newell).

The interventions or strategies employed by nurse case

managers are the phenomena of interest in this study.

What interventions do professional nurse case managers

commonly perform in patient care? To explore this question

a definition of nursing case management is required. Since

nursing case management emerged as a branch of case

management, a generic definition of case management would be

a logical starting point. A uniform definition of case management has not been available until recently. The concept has taken on multiple meanings dependent upon the context or model and setting where implemented (Bower, 1992; Brault & Kissinger, 1991; Giuliano & Poirier, 1991; Molloy, 1994; Raiff & Shore, 1993). Powell (1996) suggests that some of the definitions in the literature contribute to the confusion by describing the functions of the case manager rather than defining the concept. The only universally applied component of the various case management definitions appears to be that of coordination of care (Bower, 1992).

To eliminate some of the confusion surrounding case management a standardized definition was developed by the Certification of Insurance Rehabilitation Specialists Commission (CIRSC), in 1992 (Mullahy, 1995). This definition was approved in 1995 by the Case Management Society of America (CMSA, 1995). Currently case management is defined as:

A collaborative process which assesses, plans, implements, coordinates, monitors, and evaluates options and services to meet an individual's health

needs through communication and available resources to promote quality cost-effective outcomes (CMSA, 1995, p. 8).

The definition of nursing case management has also lacked conceptual clarity due to program-linked interpretations and setting-specific terminology (Lamb, 1992). Cohen and Cesta (1993) define nursing case management as "an approach that focuses on the coordination, integration, and direct delivery of patient services, and places internal controls on the resources used for care'' (p. 6). Giuliano and Poirier (1991) describe nursing case management as a process that "mobilizes, monitors, and rationalizes" the resources that a patient uses over an episode of illness (p. 52). Both of these definitions lack the clarity and comprehensiveness of the CMSA definition presented above. This researcher believes that developing another nursing case management definition would only add to the inconsistency already present in the literature. Therefore, the CMSA definition will be adopted to define nursing case management.

Case management is the collaborative process which

assesses, plans, implements, coordinates, monitors, and

evaluates options and services to meet an individual's

health needs through communication and available

resources to promote quality cost-effective outcomes as

used by nurses.

This definition is broad enough in scope to allow for

the diversity that exists in the application of this

process. Bower (1992) describes 12 models of case

management as a representative sample of the variety that

exists in the operationalization of the case management

process. Lyon (1993) collapses the numerous models

prevalent in health care settings into three categories of

case management: hospital-based, community-based, and across

the health care continuum models. The hospital-based, or

within-the-walls, model is where case management is provided

to the individual during hospitalization with limited

intervention after discharge (Cohen & Cesta, 1993; Lyon).

In the continuum models, case management is initiated in the

hospital setting and continues after discharge. Community-

based, or beyond-the-walls, models provide case management

exclusively in the community setting following discharge. Nursing case management is present in all of these models.

Although the CMSA is a multidisciplinary society of case management professionals, their definition bears a strong resemblance to the nursing process. The nursing process includes: assessment, diagnosis, goal development, planning, treatment or intervention, monitoring, and evaluation (American Nurses' Association, 1980; Bower, 1992). The process described by the CMSA to achieve quality cost-effective outcomes includes the following actions: assessment, problem identification, outcome identification, planning, monitoring, and evaluation. Although the CMSA definition includes implementation, this activity appears to have been left out of the list of actions necessary to achieve the outcomes. Implementation is the verb used to describe the enactment of the case management plan. The implementation component of the nursing case management process is the focus of this study. When nurse case managers implement the plan of care they take actions to promote patient outcomes. These actions, called nursing

interventions or treatments, are performed by nurses engaged in a role still within the scope of nursing practice.

A nursing intervention is defined as "any treatment, based upon clinical judgment and knowledge, that a nurse performs to enhance patient/client outcomes" (Iowa Intervention Project, 1996, p. xvii). The intervention can be direct care, including treatments performed through interaction with the patient. Interventions can also be indirect care, or treatments performed away from the patient but on the behalf of the patient. The treatments can be initiated autonomously by the nurse in response to a nursing diagnosis, by the physicians in response to a medical diagnosis, or by other providers. Interventions are concepts that require a series of actions or activities to carry them out (Bulechek & McCloskey, 1992).

Construction of a taxonomy of nursing interventions began in 1987 at the University of Iowa (Bulechek & McCloskey, 1992). The work was conducted in two phases. During the first phase a classification was developed which included 336 interventions, labels, definitions, and defining activities. This work was summarized in the first

edition of Nursing Interventions Classification (Iowa Intervention Project, 1992). The taxonomy was developed during the second phase. To date, the Iowa Intervention Project (1996) has published the second edition of a classification system called Nursing Interventions Classification (NIC) that standardizes the language used to describe the treatments all nurses perform. The classification is intended to be used by nurses in all specialties and settings (Iowa Intervention Project, 1995). To date NIC includes a label name, definition, numerical code (to facilitate computerization), and a list of activities is included for direct and indirect care interventions. The interventions are organized in a three-tiered taxonomy with six domains, 26 classes, and 433 interventions. In this structure, related interventions are first grouped together in classes and then domains for ease of use. The definition for each domain and class assists the user in locating and placing interventions. The Iowa Intervention Project reports that NIC will help to advance nursing knowledge by facilitating the study of the linkages among nursing diagnosis, interventions, and outcomes.

The interventions performed by nurse case managers are not as clearly defined in the literature. Articles and books contain listings of case manager functions, roles, and skills but the substantive structure (the what) of nursing case management is not delineated (Bower, 1992; Brault & Kissinger, 1991; Cohen & Cesta, 1993; Del Togno-Armanasco, Hopkin, & Harter, 1993; Hicks, Stallmeyer, & Coleman, 1993; Molloy, 1994; Mullahy, 1995; Newell, 1996; Powell, 1996). Some of the commonly identified roles include: advocate, assessor, broker, coordinator, educator, facilitator, liaison, and planner. There is no description on how these roles are actualized to produce quality cost-effective outcomes. This deficiency is pointed out in three nursing case management research review articles (Hale, 1995; Lamb, 1995; Marschke & Nolan, 1993).

The Critical Pathway is frequently included in the description of nursing case management interventions. However, the pathway is actually one of the tools used to accomplish the role. This tool identifies the critical incidents that must occur in patient care along a timeline to achieve appropriate length of stays (Zander, 1988).

Critical pathways describe the interventions of all health care team members. The nurse case manager is frequently involved in collaborating with the interdisciplinary team to develop the pathway. Crummer and Carter (1993) describe the pathway as the nurse case manager's major tool in coordinating patient care.

Research in nursing case management has been limited, and what research has been done has concentrated on the financial impact and patient-care outcomes (McCloskey, et al., 1994). Research that documents the interventions used to achieve these outcomes is non-existent. Lamb (1992) calls for the exploration of the process of nursing case management as well as the outcomes. To explore the process of nursing case management the interventions would have to be defined, described, and measured. Hale (1995) also calls for evaluation that contains a clear identification and description of the structure and process of case management along with the outcomes. Nurse case managers need to be able to describe what they do (the services they provide) to other providers and the public. This process information is necessary to identify and refine the practice of nursing

case management. Exploration of the process of nursing case management, with sound methodologies, is only one part of the research necessary for the role to be expanded and reimbursed (Lamb, 1992, 1995).

Although there is a dearth of systematic study on the process of nursing case management, the literature abounds with descriptions of the work performed by nurse case managers (Lamb, 1995). These descriptions are expected to contain a wealth of information that can be used to identify and define nursing case management interventions. Systematically studying this body of literature is proposed as an ideal starting point in defining the nursing case management process as currently practiced.

Purpose of the Study

The purpose of this study was to systematically analyze the body of periodical literature on hospital-based nursing case management. The analysis resulted in the identification and classification of the actions and specific behaviors that make up the nursing interventions performed by nurse case managers who practice within the hospital setting. Content analysis was the research method

used to structure an unstructured body of data. The actions and behaviors were classified using the Nursing Interventions Classification (NIC) taxonomy described earlier. Once this information was tabulated and summarized, inferences were made about the interventions used by nurse case managers in hospital settings.

Research Questions

Research questions to be answered by this study were limited to the following:

1. Based on the periodical literature, published between 1990 and 1995, what are the various nursing interventions that nurse case managers perform to enhance patient outcomes in the hospital setting?

2. Based on the NIC taxonomy, what are the most commonly used nursing case management interventions utilized across different hospital settings?

Significance of the Study

This study was conducted for several important reasons. One, this was one of the first studies to systematically explore nursing case management interventions. This information was expected to contribute to the knowledge base

of nursing case management practice. Once the interventions are identified, they can then be linked to nursing and social theories and explored with further research. A broad knowledge base is necessary for future development of the curriculum necessary to educate nurse case managers for their expanded role.

Two, the identification of nursing case management interventions was expected to assist in communicating the process to other nurses, other disciplines, and to the public. Systematically describing what nurse case managers do is necessary so others understand what contributions they make to health care. Such description is also necessary to justify the costs of providing this service and in seeking reimbursement for the services provided by nurse case managers.

Three, this study was expected to demonstrate the feasibility of using the NIC to document nursing case management interventions. NIC is a validated tool that can be used to collect data on the interventions provided by all nurses in a standardized format. In this researcher's clinical experience, such a tool had not been used in

nursing case management. Either the information had not been systematically collected or the nurse case manager had developed a tool that had not been tested for reliability or validity. The validity of NIC would be strengthened if it could be successfully used in nursing case management. If interventions were found that were not included in the NIC taxonomy they could be submitted to the Iowa Intervention Project to refine the taxonomy.

Finally, this study would hopefully serve as a stimulus for further investigation in the process of nursing case management. After the content of nursing case management is identified the context can be investigated. Research linking the process and outcomes of nursing case management is needed to demonstrate the quality and cost-effectiveness of this service. The future of nursing case management depends on sound, scientific investigation (Lamb, 1992).

<u>Summary</u>

Case management has become a popular innovation in health care during the nineties. Nursing is but one of several disciplines that provides case management services. Numerous definitions of case management and nursing case

management exist that reflect program and setting specific interpretations of this process. The CMSA provided a concise definition of case management that is applicable to nursing case management since the definition is very much like and reflective of the nursing process. The treatment or intervention component of the nursing case management process was the phenomena of interest in this study.

Nursing interventions were defined as any treatment the nurse performs to enhance patient outcomes. Nursing interventions have been classified into a validated taxonomy (NIC) that standardizes the language used to describe the treatments all nurses perform. To date, the interventions performed by nurse case managers had not been as clearly defined. The nursing case management literature listed functions and roles but the actual behaviors to accomplish roles had not been delineated.

Much of the research in nursing case management had focused on financial impact and patient-care outcomes. Very few studies have been published that focused on the process of nursing case management. Research in this area was required to identify and refine nursing case management

practice. The literature was an untapped resource of anecdotal information on the work of nurse case managers that could be used to identify and define nursing case management interventions.

The purpose of this study was to systematically analyze the body of periodical literature that pertained to hospital-based nursing case management. The descriptive research design in this study used content analysis. Using content analysis, the nurse case managers' actions and behaviors documented in a sample of 30 published documents were categorized according to the Nursing Interventions Classification (NIC). Research in the areas of nursing case management structure, process, and outcomes is necessary for the future of this practice.

CHAPTER 2

REVIEW OF THE LITERATURE AND CONCEPTUAL ORIENTATION

In this chapter, the literature review and conceptual orientation used for this study are presented. Literature related to nursing case management intervention is discussed. The conceptual orientation used in this study is based on the relationship of nursing interventions used in the nursing case management process to overall nursing knowledge.

Review of the Literature

The literature review for this study was limited to documents related to nursing case management research and nursing case management practice in ambulatory care and community settings. Documents describing hospital-based nursing case management practice that met the study inclusion criteria were reserved for the application of content analysis methods involved in this study.

Despite the growing popularity of nursing case management, the literature published remains largely anecdotal. Reviewers of case management research have pointed out multiple deficiencies. Lamb (1992) describes

conceptual and methodological issues that were hampering

nursing case management (NCM) research in the early 1990's.

One of the conceptual issues is the lack of a consistent

definition and description of NCM. Another is the absence

of a theoretical base for NCM programs. Methodological

issues reported include: weak designs, inappropriate

sampling, and unreliable, invalid instrumentation. Lamb

points out the need to study the process of NCM to refine

practice and target interventions appropriately. These

studies should include not only the ''what'' but the ''how''

or context in which interventions are delivered.

Rothman (1992) and colleagues published a book that

summarizes and makes generalizations about case management

research. The generalizations are converted into ''action

guidelines'' for case managers to put into practice. In the

area of intervention, Rothman reports that the studies

rarely specify the specific techniques used or how these

techniques are documented. He suggests that study findings

treat case management as the same independent variable when

there is much difference and inconsistency among programs.

Core components of case management practice identified by

Rothman are: client identification, assessment, planning,

coordination, monitoring, and advocacy. Rothman recommends

that case managers be trained in these core functions, no

matter where they practice.

Marschke and Nolan (1993) report how published studies

have measured structure, process, and outcomes of case

management (CM) in isolation. In their review of generic CM

research they did not find a single study that measured all

three variables in one population. Marschke and Nolan state

that the process studies describe the interventions provided

by case managers in general. Only two of the five studies

cited describe programs with nurse case managers. The other

three studies describe programs with physicians or social

workers in the case manager role. One of the two NCM

studies (Cohen, 1991) provides only a limited description of

the interventions provided. This study will be discussed

more fully later on.

Hale (1995) also reviewed research studies related to

case management. Hale's conclusions about the state of

research were similar to previous reviews. She points out

the small number of studies, the imprecise definitions of CM

and weak methodology. Hale calls for the coordination of studies and clear definitions of the structure, process, and outcomes of case management.

In a more extensive review of generic and nursing case management research, Lamb (1995) identifies gaps in this body of knowledge and lessons for future researchers. Since this study focuses on the process of NCM, only the issues related to this area will be addressed. Lamb stresses the need for the definition, description, and measurement of CM interventions. Researchers are referred to the anecdotal literature for descriptions of the work of nurse case managers that can be used to define interventions.

Research has demonstrated that nursing case management has contributed to positive fiscal outcomes. However, little has been written about the process or interventions nurse case managers use to achieve these outcomes. The Cohen (1991) study described the costs and effects of caring for Cesarean patients under a nursing case management model. The study found that while the overall length of stay decreased the nursing time spent in patient care increased. Cohen used a NCM activity form to collect information on

time spent in patient care. The report does not describe what other information was collected or what activities were performed during this additional time spent in patient care. The only other information related to interventions was the use of critical paths and discharge planning.

McKenzie, Torkelson, and Holt (1989) describe the results of an innovative nursing case management program evaluation. These investigators explored the effects of nursing case management on care and cost. The program was attributed with saving $960,000 of billed charges and 430 patient days for patients in DRG 106, Coronary Artery Bypass Graft with Catheterization. The investigators also reported that patient and nurse satisfaction had been enhanced since the program was implemented. The nursing case management model used involved selecting populations that would benefit most from NCM, developing CM plans, implementing and monitoring the plans, and evaluating the results. Nursing case manager actions described were: developing a critical path; meeting the patient in pre-admission; explaining the plan of care; providing hands-on care; monitoring daily care; reviewing the critical path; collaborating with the

physician; observing for redundant orders; communicating

variances; and coordinating the patient's discharge needs.

This article, although weak in research design, is unique in

its fairly extensive listing of nursing case management

interventions.

Wimpsett (1994) described an orthopedic nursing case

management program where case managed patients met their

independence goals sooner, knowledge retention was

increased, and patient satisfaction was increased. The

nurse case manager in this program was responsible for

preadmission assessment and education. There was no attempt

to measure whether the outcomes of this study were due to

the nurse case manager or the many strengths of the pre-

operative education program provided.

Rogers, Riordan and Swindle (1991) presented case

studies, that were rich in the description of nursing

interventions, in their report on community-based nursing

case management. Nursing actions described included: diet

and insulin adjustment, arranging for homemaker and Meals-

on-Wheels, spiritual support, and medication teaching. This

program reported a saving of $226,089 for 48 patients in the eight months their program was operational.

In a pilot study of psychiatric nurse case managers, Van Dongen and Jambunathan (1992) describe the nature of the care provided. This study emphasizes the context of the nursing case management process versus the content. Nursing interventions from the client's perspective include: listening, counseling, and teaching. The nurse case managers reported that they used the nursing process with emphasis on assessment and coordination. Client satisfaction questionnaires were very positive and emphasized the caring, and supportive nature of nurse case managers.

The importance of the relationship between the client and the nurse case manager was also addressed by Newman, Lamb, and Michaels (1991). Margaret Newman visited Carondelet St. Mary's Hospital and Health Center in Tucson, Arizona to describe the nature of nursing case management. In this qualitative study the context or experience of nursing case management was analyzed. Dimensions of the nurse case management relationship included initiating and

concluding interaction, facilitating informed choices,

pattern recognition, rhythm and timing, and opening of self.

In another qualitative study, Lamb and Stempel (1994)

explored the client's perspective of nursing case

management. A process in which the client grows and becomes

their own expert in self care was uncovered. Nursing case

management activities that facilitate this growth require

the nurse case manager to go beyond their traditional expert

activities and roles to develop therapeutic relationships.

Goodwin (1994) explored the differences in nursing

case management activities used by home health agency case

managers and case managers in an HMO group. This study

employed a data collection instrument called the Competency

Behaviors of Case Managers Inventory (CBCMI). This

instrument, of common case management activities, was

developed by Connors (1989) to test the impact of a

continuing education program on the case management

knowledge and skill level of nurses. The instrument was

modified by Goodwin to score the frequencies of case

management activities performed. The respondents reported

engaging in the following activities: assessment, planning,

implementation, and evaluation. Goodwin found that the home health agency case managers reported engaging in assessment, planning, and implementation more frequently than the HMO case management group. The HMO group did engage in evaluation activities more frequently than the home health group. Goodwin contributes the lower response rate of the home health case managers in evaluation to their direct care role with limited involvement in policy and procedure review. This study validated the use of the CBCMI as an instrument to measure case management activities.

As stated earlier, the CBCMI was originally developed by Connors (1989). The instrument consists of 68 behavioral statements related to six dimensions of the nursing case management process. The dimensions include: entry, assessment, nursing diagnosis, goal setting and service care planning, implementation, and evaluation. A five-point Likert scale was used to score the participant's self-perceptions on the importance of the task and the adequacy of preparation for the task. Connor established content validity by including items from the case management literature and submitting the instrument for expert review.

Reliability was assessed in a test-retest pilot study and further established after the instrument was administered to continuing education program participants. This is the first instrument reported in the literature to measure nursing case management activities.

Another instrument was developed by Conti (1993) to identify the role behaviors of nurse case managers practicing in a broker model. This survey instrument consists of 38 items developed from an analysis of ethnographic interviews. Roles identified by 58 respondents included: public relater, educator, expediter, monitor, problem-solver, explainer, negotiator, planner, communicator, contactor, recommender, broker, researcher, assessor, documenter, and coordinator. Conti's findings included the need for education and research efforts that clarify and specify the role of the nurse case manager.

This brief review of the literature demonstrates one of the major gaps in nursing case management research. The gap is the lack of systematic study related to the process of nursing case management. The content and context of this

process need to be defined and described to validate nursing

case management's contribution to health care.

Conceptual Orientation

The conceptual orientation for this study is the

relationship of nursing knowledge to the nursing case

management process. This orientation is based on several

assumptions. One, nurse case managers perform nursing

interventions. Nurse case managers, although functioning in

an expanded role, still function within their scope of

practice. Therefore, the interventions they implement are

nursing interventions. Two, the case management process is

an extension of the nursing process. The nursing process

includes: assessment, diagnosis, goal development, planning,

treatment or intervention, and evaluation (American Nurses'

Association, 1980; Bower, 1992). The case management

process described by CMSA (1995) includes: assessment,

problem identification, outcome identification, planning,

implementing, monitoring, and evaluation. The nursing

process represents the steps taken to help the individual

reach specified and attainable goals (ANA). The case

management process represents the steps taken to help the

individual reach quality cost-effective outcomes. Three,

nurse case managers use their clinical judgment and nursing

knowledge to select nursing interventions appropriate to the

patient's diagnoses and desired outcomes. Four,

identification and systematic study of nursing case

management interventions will contribute to the overall body

of nursing knowledge.

The use of standardized language, the NIC taxonomy, to

describe nursing interventions provides the base for

research that links nursing diagnoses, interventions, and

outcomes.

Figure 1 is a schematic illustration of the

relationship between the nursing case management process and

nursing knowledge. The building blocks of nursing knowledge

consist of the following concepts: nursing diagnoses,

interventions, and outcomes. The nurse, in this study the

nurse case manager, assesses the physiologic and

psychosocial status of an individual. Then, using clinical

judgment about the human responses to actual or potential

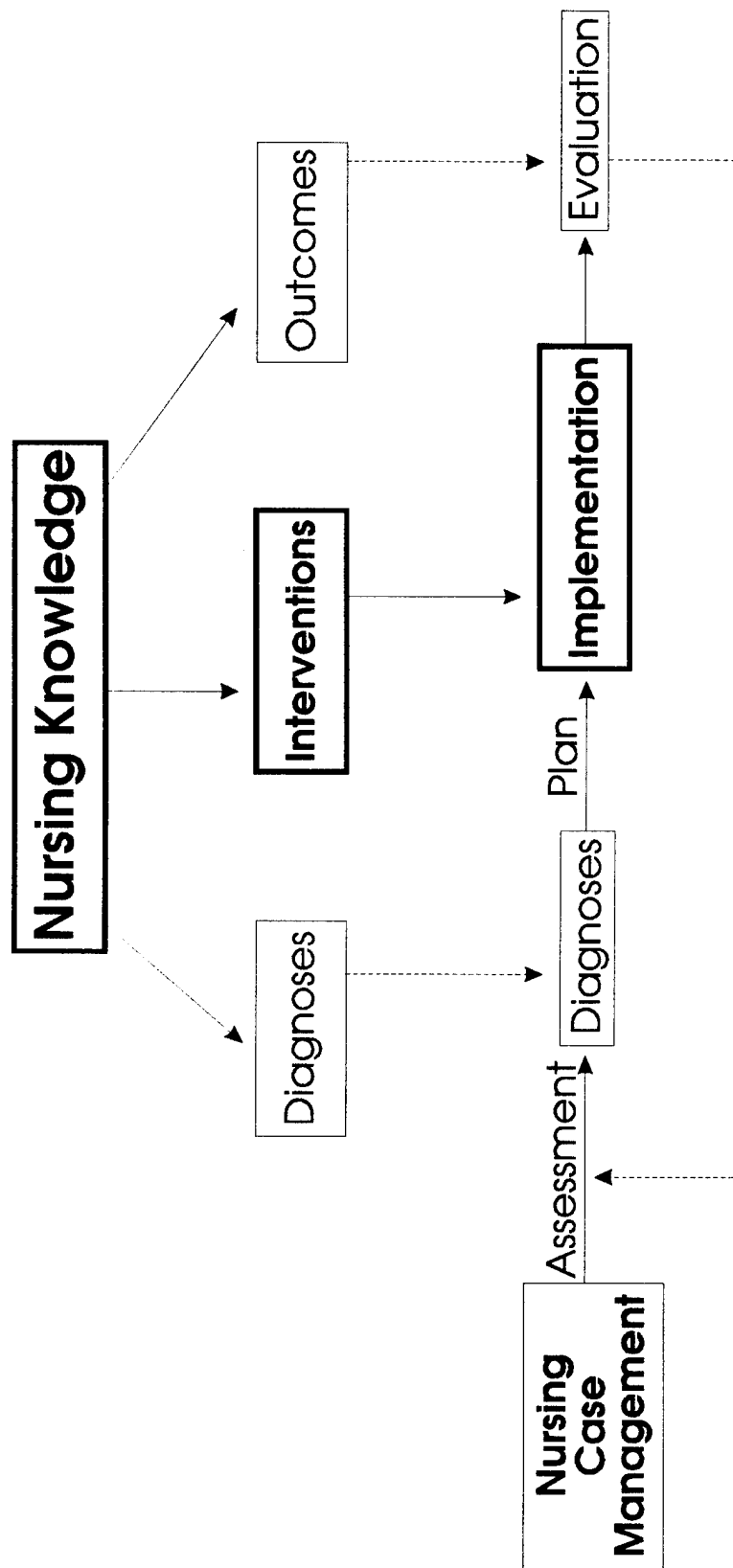health problems uncovered in the assessment, formulates

Figure 1. Conceptual Orientation: The Relationship of the Nursing Case Management Process to Nursing Knowledge

nursing diagnoses. These diagnoses and the medical diagnoses provide the direction in the choice of interventions to be implemented and the outcomes to be evaluated (ANA, 1995). The case management plan includes the diagnoses and interventions necessary to achieve the identified outcomes. Implementation of the plan is the action phase of the case management process or when the interventions are performed. Interventions are the actual behaviors or treatments of the nurse case manager and other healthcare team members that can be measured and observed. Evaluation is the measurement of the individual's response to the healthcare services (interventions) provided and the products delivered. It includes measuring the effectiveness, necessity, and efficacy of the case management plan itself (CMSA). If the outcomes have not been achieved the process is repeated.

Summary

In this chapter the body of literature related to the process of nursing case management was reviewed. Very few studies have been conducted in this area. Sources intended to address nursing case management process identified very

few interventions that the nurse case managers use to

achieve outcomes. Several of the process studies explored

the context of nursing case management. Although context is

an important area to study emphasis must first be placed on

identifying what nurse case managers do. A conceptual

orientation for the study was presented that depicts the

relationship of nursing knowledge to the case management

process.

CHAPTER 3

METHODOLOGY

The research methodology used in this study is discussed in this chapter. Specific steps, such as unitization, sampling, recording, and data analysis, which are used in this method are described.

Research Design

The research methodology chosen for this study was content analysis. Content analysis is a quantitative research technique that uses specialized procedures to make replicable and valid inferences from data in a text (Krippendorff, 1980; Weber, 1990). Brink and Wood (1994) describe content analysis simply as structuring unstructured data. Content analysis has also been defined as a procedure to categorize verbal or behavioral data in order classify, summarize, and tabulate it (Fox, 1982). Polit and Hungler (1995) describe content analysis as the quantification of narrative, qualitative material. All of these definitions will be combined in the following operational definition for this study. Content analysis is a research technique that enables the researcher to systematically analyze oral or

written communication (data) to identify and categorize variables of interest in order to draw valid conclusions.

Although the term content analysis is only about sixty years old, it has a history stretching back into the 1700s (Berelson, 1971; Krippendorff, 1980). Berelson wrote that a form of content analysis occurred every time something was read, summarized, and interpreted. Content analysis, as a research technique, was originally used by communication specialists but is now widely used in the social sciences and humanities (Krippendorff). This technique has extended into nursing research. Bulechek and McCloskey (1992) describe their use of content analysis in the early phases of the Nursing Interventions Classification (NIC) to develop the categories and their labels.

There are multiple applications described by Berelson and Krippendorff but they relate to mainly to the social sciences. Fox's (1982) description of the three purposes of content analysis makes it more applicable to nursing research. These purposes are: to analyze the semantic content, to analyze the feeling tone communicated by the data, and to make inferences about the intent of the source.

Content analysis was used in this study to analyze the actual (semantic) content of the literature related to hospital-based nursing case management to identify nursing case management interventions.

Weber (1990) states that there is not one right way to do content analysis; the investigator must choose the method appropriate to the research problem. No matter what methods are chosen, the procedural steps of the content analysis, like any other research design, must be explicitly described in order for the study to be evaluated and replicated. The researcher begins by defining the phenomena of interest and exploring the universe of that phenomena. The content analyst must decide what data might allow for inferences to be made about the phenomena of interest. The data is then broken down into units of information that must be recorded in a durable medium, distinguishable from other data, analyzable, and representative of the phenomena of interest (Krippendorff, 1980).

The process of defining and identifying the units is called unitization and is the first step in content analysis. Krippendorff makes distinctions among three types

of units: sampling, recording, and context units. <u>Sampling</u>
units are parts of the observed reality of the phenomena
that are independent of each other. Sampling units in
content analysis can be books, documents, interviews,
movies, or other forms of durable media. The sample is
drawn from a population of sampling units. <u>Recording</u> units
carry the information of the sampling units and are the
analyzable parts of the sampling unit. The recording unit
is the specific part of the content; a word, sentence, or
theme; that is classified. Recording units are the parts of
the text that are coded and placed into categories. <u>Context</u>
units describe the larger parts of the information medium
that must be examined to characterize the recording units.
Examples of context units in content analysis are sentences,
paragraphs, or the entire text.

The next step in content analysis is the selection of
the sample. Sampling is necessary to reduce a potentially
large volume of data to a manageable size (Krippendorff,
1980). The content analyst has the freedom to devise any
sampling plan desired as long as it yields a sample that is
representative of the phenomena of interest. For a sample

to be representative, each unit must have an equal chance of being represented in a collection of sampling units. Random sampling is the ideal scheme to prevent selection bias. In this procedure all units are listed and then a device that assigns equal probability to each unit is employed, for example, table of random numbers or rolls of a die. Other types of sampling schemes (stratified, cluster, purposive, varying probability, and so on) can be used as long the analyst provides justification in terms of the overall research design. Once the sampling plan has been devised the sample size must be determined. Krippendorff reports that this is a cost-benefit question that depends on how the property to be generalized is distributed in the sample. Since content analysis is a process for quantifying narrative, qualitative data it has the potential for including large volumes of information. Limiting the sample to a manageable size would promote the likelihood that an analysis will be completed (Brink & Wood, 1994).

The next step in content analysis is recording the data. Krippendorff (1980) writes that data cannot be analyzed unless it is recorded. Explicit recording

instructions need to be developed that contain

characteristics of the coders, training and preparation of

the coders, rules for assigning recording units into

categories, and instructions on how to manage the data.

After the data is recorded it is reduced or grouped

into a smaller number of categories that can then be

analyzed. This process is called data reduction. Weber

(1990) reports that ''information loss strategies'' should

result in interesting and useful generalizations while

reducing the amount of information to be analyzed and

reported. One strategy is the development of frequency

tabulations for the categorized data. The frequencies

indicate for each category how many times that response or

phenomenon occurred. The data can then be described in

numerical terms (Brink & Wood, 1994). Although Krippendorff

(1980) lists data reduction as a separate step he reports

that it can also be performed during the analysis. Data

reduction will be performed during the analysis step in this

study.

In the next step the analyst develops constructs for

inference. Krippendorff (1980) states that ''an analytical

construct operationalizes what the analyst knows about the interdependencies between data and context'' (p. 99). The analytical construct is a series of if-then statements that are empirically based. They can also be described as a theory about a context in which the independent variables represent all possible data and the dependent variables represent what the content analyst wishes to infer, predict, or learn.

The last step in this research design is data analysis. In this step, numerical results from recording occurrences in each category are described and synthesized. Content analysis yields only nominal and verbal ordinal data therefore analysis is limited to the use of descriptive statistics (Fox, 1982; Brink & Wood, 1994). The analyst is able to report frequency distributions, and measures of central tendency, that is, the median and mode. Once the data analysis is complete the analyst presents the results and shares interpretations of the results.

Reliability in content analysis estimates the extent to which any part of the research design represents variations in the phenomena observed rather than the

extraneous effects in observation, measurement, and analysis (Krippendorff, 1980). To establish reliability of the content analysis a random sample of the data must be analyzed by two or more people (Brink & Wood, 1994). Weber (1990) reports that reproducibility or intercoder reliability is the reliability assessment most frequently used in content analysis. This assessment measures the amount of agreement in results between two coders analyzing the same data. Intercoder reliability should be assessed over time because humans are subject to fatigue and make may mistakes as the coding proceeds. The minimum reliability standard in content analysis is high reproducibility (Weber). Fox (1982) recommends that a 90-percent agreement be reached for one- or two-digit codes and 85-percent agreement for three-digit codes since the possibility for disagreement exists at any level of the code.

An audit trail also contributes to the reproducibility of the study by documenting the process in which data were collected and analyzed, and interpretations were made (Guba, 1981). The audit trail would consist of the actual sampling

units coded, the data sheets, and the investigator's journal
that contains an ongoing account of the process.

Validity of content analysis is the extent to which its
inferences are upheld in the presence of independently
obtained evidence (Krippendorff, 1980). Weber (1990) points
out that research results obtained through content analysis
are valid if the results do not depend upon or are
generalizable beyond the data, methods, and measurements of
the particular study. One form of validity in content
analysis refers to the extent in which categories developed
measure the constructs they were intended to measure (Brink
& Wood, 1994; Fox, 1982; Weber, 1990). This weakest form of
validity is face validity. Brink and Wood report that face
validity is strengthened by the relevance of the categories
to the research question and the ease with which data fit
into the categories. Stronger validity can be obtained by
comparing the data of content analysis with an external
criterion. Investigators are encouraged to use other forms
of validity like construct validity, concurrent validity,
hypothesis validity, predictive validity, and semantic

validity but this is not always possible in content analysis.

The validity of the Nursing Interventions Classification (NIC) was tested in clinical practice by two surveys which assessed the frequency with which nurses perform each of the interventions. The first survey was sent to specialty organizations and the second to individual nurses in clinical practice. Results indicated that each intervention is used in clinical practice (Bulechek, McCloskey, Titler, & Denehey, 1994). Another survey was sent to Association of Operating Room Nurses (AORN) members. The respondents identified 20 interventions that represented the essence of perioperative nursing (Steelman, Bulechek, & McCloskey, 1994). The repetition of surveys demonstrates the reliability of the NIC taxonomy.

A questionnaire was also sent to a sample of researchers and theorists to assess the meaningfulness of the classes and domains. These participants were asked to rate each domain and class based on how characteristic it was on five criteria. These are the same criteria reported by Fox (1982) as desirable attributes of a content analysis

code. They are: clarity, homogeneity, inclusiveness, mutual exclusiveness, and theory neutral. The domains were rated as quite or very characteristic by 77% of the respondents. The classes were rated quite or very characteristic by 88% of the respondents (Iowa Intervention Project, 1995).

Content analysis was the appropriate research design for this study for several reasons. One, it allowed for the exploration of nursing case management interventions in the existing literature. Content analysis was an expedient and efficient exploration of the phenomena in available anecdotal literature. Two, this study was a logical starting point for the investigation of nursing case management interventions. An exploratory investigation such as this would have to be accomplished before designing a valid instrument to survey nurse case managers about the inventions they use in their practice. Three, content analysis was an unobtrusive technique to measure the phenomena of interest. This eliminated the following threats to validity: testing effects, the Hawthorne effect, and experimenter effects. Finally, content analysis could be used to generate variables in future research.

Unitization

Three types of information bearing units were used in this study. The sampling units were the documents in the literature that described nursing case management programs that were located in hospital settings. A description of how these units were selected follows in the next section. The recording units or the analyzable parts of the documents were the nurse case manager actions or behaviors reported. These recording units were to be contained in the larger context units of sentences.

Sampling

A search of published data was conducted using relevant computer data bases, such as Medline and CINAHL, for a five year period (January 1990 to December 1995). Key words used to conduct the searches were: case management, managed care programs, and nursing. The abstracts of 317 documents obtained as a result of this search were screened. From these abstracts, 61 documents were identified that contained data on hospital-based nursing case management. Each of the 61 documents was then reviewed in light of the following criteria for acceptability: (a) nurses provided the case

management services; (b) case management interventions were
provided in the hospital setting at least 80% of the time;
(c) the case management program did not occur in an
inpatient psychiatric or rehabilitation setting; (d) the
documents appeared in a peer reviewed or refereed journal;
(e) documents described nursing case management programs in
the United States; (f) the documents were written by nurses;
and (g) the document provided a description of nurse case
manager actions and/or behaviors, not just a description of
the program. Duplicate documents by the same author(s),
documents describing theoretical programs, and documents
that did not meet all the other inclusion criteria were
rejected. A list of the articles rejected is provided in
Appendix B. A criterion-based sample of 30 documents was
obtained after these screenings. Documents included in this
content analysis are indicated on the reference list by an
asterisk enclosed in brackets at the end of the reference.
This nonprobability sampling method was chosen to maximize
the range of information uncovered during content analysis.

Recording

Recording includes a description of the coders, training conducted, coding rules, and data management instructions.

Coders

The two coders employed in the recording process were professional nurses with nursing case management education or experience. The researcher was the primary coder and a master's prepared nurse with case management experience was the secondary coder. The researcher analyzed all the documents and the secondary coder analyzed ten percent of the final sample to establish intercoder reliability. Since the sample contained 30 documents the secondary coder analyzed the first, fifteenth, and last document. These intervals were spaced to maintain reliability of the coding process over time.

Training

The primary and secondary coder trained together on the recording process. The training included a review and critique of the recording instructions while the instructions were being applied to a sample document. These

instructions were modified by the researcher to ensure
clarity. Both coders then individually pretested the
instructions and categories on three sample documents to
ensure that: (a) the instructions were clear and
unambiguous; (b) the instructions did not overlap; and (c)
the document to be coded made enough reference to nursing
case management activities and behaviors to warrant coding.
When the pretesting demonstrated at least 80 percent
agreement between the two coders the instructions were
accepted as final and were not altered during the data
recording phase of the study. The following equation was
used to compute agreement:

$$\frac{\text{Number of agreements}}{\text{Number of agreements + disagreements}} = \text{\% Agreement}$$

See Appendix A for a copy of the recording instructions.

Data Code

The data code for this content analysis of nursing case
management interventions consisted of the NIC taxonomy and
classification developed by the Iowa Intervention Project
(1996). To use the taxonomy the nurse selects interventions
based on the patient's diagnoses and desired outcomes. The

interventions are grouped by domains and classes. The

domain level is used in the preliminary search for an

intervention and then the class level provides more focus.

For example, if a patient has an educational need related to

diabetes, the Behavioral domain should be reviewed and then

the Patient Education class. The intervention selected

would be Teaching: Disease Process. The numerical code

identified by the Iowa Project was used to simplify the

recording of intervention labels. The first digit in the

code identified the domain of the intervention. The second

digit, the class of the intervention. The last four digits,

the intervention taxonomy number. Using the taxonomy allows

nurses to use standardized language to describe the

treatments they perform.

This data code was selected because of its relevance to

the research questions and its demonstrated validity. The

code was validated during its development by nurse expert

consensus using the Delphi technique and two sets of

questionnaires (Bulechek & McCloskey, 1992). Weighted

ratios were calculated for each activity; activities with

ratios .80 or greater were labeled as critical. Activities

with ratios less than .50 were discarded.

Data Management

The data in this study consisted of the actual

documents themselves and reports from a database developed

by the researcher using the computer program askSam, version

3.0. Each document (sampling unit) was numbered in the

upper right-hand corner and arranged alphabetically and

numerically in a binder. The initials of the coder were

placed under the document number in case errors had to be

corrected. The word ''posted'' was written in the lower

right-hand corner when the information was transferred to

the database. Data entered into the database included: the

sample number, the last name of the author(s), the title of

the document, the journal name, the year of the document, a

setting description, identification of the nurse case

manager, the six-digit intervention codes from the document

analyzed, and the phrases or sentences that described the

nursing case management actions, behaviors, or treatments

coded. Data reports were generated from the askSam program

for each nursing case management intervention coded from the

sample documents. The reports included: the NIC numerical code, intervention label, and definition; the sample number; and the context units (actual phrases or sentences) from the documents analyzed. These reports were grouped by intervention and presented as data sheets in Appendix B.

Constructs for Inference

Constructs for inference refer to the deductions the researcher makes about the interdependencies between the data and its context. For purposes of this study the following analytical constructs were developed:

1. If a nursing case manager action or behavior listed in a sampling unit fit into the NIC taxonomy then it could be called a nursing case management intervention.

2. If nursing case manager actions and behaviors clustered around certain nursing interventions then these could be described as common NCM interventions used in the hospital setting.

3. If the NIC taxonomy could be used to classify the NCM actions and behaviors in the hospital setting, then it could be used to classify other nursing case management interventions.

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Data Analysis Plan

Data were reduced before being analyzed. Intervention categories without observations were eliminated; only the categories with recorded observations were included in the analysis. The data analysis plan for this study analysis consisted of descriptive statistics appropriate for nominal and ordinal data. The statistics were manually calculated and then reported as frequency distributions. Further mathematic operations were not thought to be meaningful for the data obtained. Frequency distributions were be constructed of the interventions observed in the data and the count of the observations falling into each category. These data were discussed in narrative form and displayed in tabular form.

Summary

In this chapter the research methodology of content analysis was defined and described in considerable detail. The steps in this analysis technique included: unitization, sampling, recording, data reduction, and analysis. Justification for choosing this design to study nursing case management interventions was provided. The chapter

concluded with a description of the methodology used in this study to answer the research questions.

CHAPTER 4

RESULTS

The findings of this study are presented in this chapter. The presentation includes a description of the sample studied, established intercoder reliability, and answers to the research questions posed.

Sample

A sample of thirty documents was obtained after applying the acceptability criteria. Characteristics of the sample are presented in Figure 2.

The sample documents represented nursing case management programs across the continental United States. Ten documents described programs in the Southeast, three in the Northeast, ten in the Midwest, four in the Southwest, and three on the West coast.

Populations served by the nursing case management programs ranged from perinatal to geriatric patients. Nursing case management was most frequently provided to medical and surgical patients (17 programs). Five

Sample Number & First Author	Patient Population	Nurse Case Manager (NCM)	Number of NCM Interventions
1. Anderson-Loftin, 1995	Top 10 DRGs[a]	Clinical Nurse Specialist (CNS)	8
2. Brubakken, 1995	All inpatients	Direct Care Nurse	6[b]
3. Crummette, 1991	Pediatric	Pediatric Nutrition Nurse Clinician	20
4. Daly, 1991	Critically Ill	Direct Care Nurse	6[b]
5. Dring, 1994	Medical	Clinical Nurse Specialist	4
6. Edelstein, 1993	Diabetes	Diabetes Case Manager	11
7. Esler, 1994	Pneumonia	Direct Care Nurse	8[b]
8. Gibbs, 1995	All inpatients	Direct Care Nurse	3[b]
9. Hauser, 1995	Kidney Transplant	Clinical Nurse Specialist	3
10. London, 1993	All inpatients	Direct Care Nurse	8[b]
11. Mahn, 1993	CABG Patients[c]	Cardiovascular Case Manager	6
12. Mann, 1993	Orthopaedic	Nurse Practitioner (NP)	9
13. Merchant, 1992	Ophthalmic	Ophthalmic Case Manager	4
14. Parkman, 1994	All inpatients	Direct Care Nurse	7[b]
15. Propotnik, 1993	Acute Geriatric	Direct Care Nurse	4[b]

[a]DRG = Diagnostic Related Group
[b]NCM also performed direct care interventions
[c]CABG = Coronary Artery Bypass Grafting

Figure 2. Listing of Sample Elements ($\underline{N}$ = 30).

Sample Number & First Author	Patient Population	Nurse Case Manager (NCM)	Number of NCM Interventions
16. Reinhart, 1995	Acute M I[d]	Cardiology CNS	3
17. Ritter, 1992	Critical Care	Clinical Care Manager (CCM)	4
18. Schryer, 1993	Pediatric Surg.	Nurse Clinician CM	4
19. Shendell-Falik, 1995	Perinatal Unit	Designated NCM	8
20. Sherman, 1994	Medical/ Oncology	Clinical Nurse Specialist	12
21. Smith, Danforth, 1994	All inpatients	NCM/Educator (NCME)	16[b]
22. Smith, 1994	Pediatric Chronic	Clinical Nurse Specialist	11
23. Smith, Jones, 1993	Medical/Surgical	Direct Care Nurse	4[b]
24. Strong, 1991	Multisystem Fail.	Cardiovascular Case Manager (CV CM)	14
25. Travis, 1993	TURP Patients[e]	Designated NCM	10[b]
26. Trella, 1993	Acute Geriatric	CNS initially then Direct Care Nurses	12[b]
27. Uzark, 1994	Pediatric Cardiac	Pediatric Nurse Practitioner (PNP)	3
28. Von Rotz, 1994	Trauma Patients	Clinical Nurse Specialists	15
29. Wadas, 1993	All inpatients	Professional Nurse Case Manager (PNCM)	6
30. Weinstein, 1991	Pediatrics	Designated NCM	18

[b]NCM also performed direct care interventions
[d]MI = Myocardial Infarction
[e]TURP = Transurethral Resection of the Prostate

Figure 2 Continued. Same Title.

pediatric, four critical care, and two geriatric programs

were also described. The sample also included one trauma

and one perinatal program.

Programs in the sample were based on a variety of

nursing case management models described in the literature.

Six programs described being based on the New England model

of nursing case management. Two programs were based on the

Carondelet model of nursing case management. One program

implemented the ''Primm's model of differentiated case

management'' (Brubakken, Janssen, & Ruppel, 1994). Six

programs described themselves as ''collaborative case

management'' models. The remaining fifteen programs did not

specify whether they were based on a particular model.

Descriptions of the remaining programs appeared to be a

blend of the above models.

The nurse performing the role of case manager (NCM)

also varied in the sample programs. In two programs, the

NCM role was performed by nurse practitioners. Clinical

Nurse Specialists performed the nurse case manager role in

seven of the programs. In nine programs, the direct care or

bedside nurse performed the role of case manager in addition

to direct care responsibilities. A nurse was designated specifically as nurse case manager in 12 of the 30 programs. In two of these twelve programs, this NCM was also expected to engage in direct care on a regular basis.

Coding Reliability

Reproducibility in coding was established through intercoder reliability. Training consisted of practicing the coding instructions on three documents not included in the sample. Intercoder percent agreement was obtained by dividing the number of agreed upon interventions by the total number of nurse case manager interventions identified times 100 percent. When 100 percent agreement was reached on all three training documents both coders independently coded the first sample document.

Eighty-eight percent agreement was reached between coders on the first sample document. The investigator then coded documents two through fourteen. The investigator and second coder then coded document number fifteen. One hundred percent agreement was reached between coders on sample number fifteen. The investigator then coded documents sixteen through twenty-nine. Both coders then

coded sample document number thirty. Agreement between coders was eighty-three percent on this document. All these assessments of intercoder agreement exceeded the 80 percent cutoff established for this study. Disagreement between coders occurred in the identification of the actions and behaviors in the document text, that represented interventions, and not with applying the NIC code to the identified interventions.

Two interventions, Staff Education and Health Care Information Exchange: Within Agency, were added to the NIC taxonomy by the coders to reflect unique NCM interventions described in the sample documents. Staff Education (code 6a7829) was defined as: Developing and presenting formal education programs or informal learning opportunities to staff assigned to a specific clinical area. The Staff Education intervention was added because none of the interventions in the taxonomy included this type of teaching. Health Care Information Exchange: Within Agency (code 6b7961) was added to describe the provision of patient care information to other health professions within the

facility that did not occur in a care conference, change of

shift report, or in relation to critical path development.

Research Questions

This study was designed and conducted to answer two

questions the investigator had regarding nurse case manager

interventions. The findings of this study are presented

according to the research questions generated.

Question 1.

The first research question asked: Based on the

periodical literature published between 1990 and 1995, what

are the various nursing interventions that nurse case

managers perform to enhance patient outcomes in the hospital

setting? From the Nursing Interventions Classification

(NIC) taxonomy of 433 nursing interventions, only 41

different interventions were identified in the sample

documents. Nursing case management interventions found in

the documents included both direct and indirect care

interventions. Nursing case management interventions were

defined as any treatment that a NCM performed using clinical

judgment and knowledge to enhance patient outcomes. In

other words, nursing case management interventions were

nursing interventions performed by NCMs. <u>Direct</u> care
intervention was defined as treatment performed through
interaction with the patient. <u>Indirect</u> care intervention
was defined as treatment performed away from the patient but
on behalf of the patient.

The direct care interventions performed by NCMs engaged
daily in bedside patient care in addition to nursing case
management were not identified in the documents probably due
page limitation policies of the documents. Therefore, these
interventions are not included in this analysis. If these
interventions had been identified the number of
interventions found would have been greater than the 41
found in the analysis.

The number of nursing case management interventions
identified ranged from three to twenty per individual
document. Actual number of nursing case management
interventions coded per sample document was presented
earlier in Figure 2. Coded interventions fell into all six
domains of the NIC Taxonomy. However, the majority of the
sample interventions (n = 22) were coded in the Health
System Domain. Care in this domain is defined as supporting

the effective use of the health care delivery system. Interventions were coded into all three classes of this domain. That is, five interventions were coded in the Health System Mediation Class, eight in the Health System Management Class, and nine in the Information Management Class. Figure 3 is a display of how all coded nursing case management interventions were clustered on the NIC taxonomy domains and classes.

Eleven interventions were coded into the Behavioral Domain. This domain describes care that supports the psychosocial functioning and facilitates life-style changes. The Coping Assistance and Patient Education Class of this domain each accounted for four coded interventions.

The remaining eight interventions were coded into the Physiological: Basic (n = 1), Physiological: Complex (n = 2), Safety (n = 2), and Family (n = 3) domains.

Question 2.

The second research question asked: Based on the NIC taxonomy, what are the most commonly used nursing case management interventions utilized across different hospital settings? Nine of the 41 interventions were performed in at

Domain	Class	Number
Physiological: Basic	Activity and Exercise Management	0
	Elimination Management	1
	Immobility Management	0
	Nutrition Support	0
	Physical Comfort Promotion	0
	Self-Care Facilitation	0
Physiological: Complex	Electrolyte and Acid-Base Management	0
	Drug Management	0
	Neurologic Management	0
	Perioperative Care	2
	Respiratory Management	0
	Skin/Wound Management	0
	Thermoregulation	0
	Tissue Perfusion Management	0
Behavioral	Behavior Therapy	1
	Cognitive Therapy	0
	Communication Enhancement	2
	Coping Assistance	4
	Patient Education	4
	Psychological Comfort Promotion	0
Safety	Crisis Management	0
	Risk Management	2
Family	Childbearing Care	0
	Lifespan Care	3
Health System	Health System Mediation	5
	Health System Management	8
	Information Management	9

Figure 3. Clustering of Coded Nursing Case Management

Interventions in the NIC Taxonomy.

least 33 percent of the hospital settings in this sample.
In addition, seven interventions were performed by nurse
case managers in at least 23 percent of the settings. The
distribution of the 16 most frequently occurring
interventions is shown in Table 1.

Twenty-five of the 41 interventions (61%) were coded in
four or fewer documents. Most interventions were present in
two or three documents. However, each of the following
coded interventions were present in only one document or
setting: Urinary Tube Care, Active Listening, Play Therapy,
Emotional Support, Parent Education: Childrearing, Vital
Sign Monitoring, Delegation, and Shift Report. Appendix C
contains the definitions for all 41 interventions and the
context units coded from all the sample documents that
exemplified the interventions.

Critical path development was the most frequently
identified intervention and was performed in 90 percent of
the settings by the nurse case manager. The second most
frequently occurring nurse case manager intervention was
surveillance. Sixty-three percent of the documents reported

Table 1

Most Frequently Occurring Interventions

Intervention Label (Code)	Number of Settings
Anticipatory Guidance (3R5210)	5
Health System Guidance (6Y7400)	5
Documentation (6b7920)	6
Health Care Information Exchange (6b7960)	7
Multidisciplinary Care Conference (6b8020)	7
Telephone Consultation (6b8180)	7
Patient Rights Protection (6Y7460)	8
Physician Support (6a7710)	11
Referral (6b8100)	11
Teaching: Individual (3S5606)	12
Discharge Planning (6Y7370)	12
Quality Monitoring (6a7800)	14
Health Care Information Exchange: Within Agency[a] (6b7961)	16
Admission Care (6Y7310)	18
Surveillance (4V6650)	19
Critical Path Development (6a7640)	27

[a]Intervention developed by coders to reflect document findings.

that the nurse case manager engaged in activities that

included acquisition, interpretation, and synthesis of

patient data for clinical decision-making. Nurse case

managers were involved in admission care in 60 percent of

the settings. In 53 percent of the documents the nurse case

manager performed health care information exchange within

the agency.

The NIC taxonomy provided a definition for each nursing

intervention. Sample interventions were categorized based

on the nursing case management activities reported in the

sample document. Definitions and exemplars of the nine most

common (occurred in at least 33 percent of the sample

settings) nursing case management interventions are

presented in Figure 4.

Summary

The findings of this study were presented in this

chapter. The NIC taxonomy was used to code 41 interventions

as described in published documents of thirty different

hospital settings. The interventions were coded into all

six domains of the NIC taxonomy but most frequently in the

Label (Code)	Definition	Exemplar
Critical Path Development (6a7640)	Constructing and using a timed sequence of patient care activities to enhance desired patient outcomes in a cost-effective manner.	Critical pathways for the 10 DRGs that had the highest volume of hospital admissions were developed by the NCM (Anderson-Loftin, Wood, & Whitfield, 1995).
Surveillance (4V6650)	Purposeful and ongoing acquisition, interpretation, and synthesis of patient data for clinical decision-making.	The CM reviews the care map at least twice a day during the hospital stay to verify that all activities are being conducted as planned (London, 1993).
Admission Care (6Y7310)	Facilitating entry of a patient into a health care facility.	The NCMEs use their clinical expertise in assessing the patient's and family's current risk factors associated with the patient's admission (Smith, Danforth, & Owens, 1994).
Health Care Information Exchange: Within Agency (6b7961)	Providing patient care information to health professionals within the facility.	One of the primary functions of the CM is to coordinate information (Von Rotz, Yates, & Schare, 1994).

Figure 4. Intervention Labels, Codes, Definitions and Exemplars.

Quality Monitoring (6a7800)	Systematic collection and analysis of an organization's quality indicators for the purpose of improving patient care.	The CM identified the need for the acute unit to send patients to therapy on the day of discharge to the rehabilitation service, thereby decreasing the number of days the patient missed therapy (Mann, Hazel, Geer, Hurley, & Podrapovic, 1993).
Discharge Planning (6Y7370)	Preparation for moving a patient from one level of care to another within or outside the current health care agency.	The Social Service consult reconfirmed the delivery of the hospital equipment for the following day. Prevention of prolonged hospitalization was accomplished by the CM overseeing these final details (Von Rotz, et al., 1994).
Teaching: Individual (3S5606)	Planning, implementation, and evaluation of a teaching program designed to address a patient's particular needs.	One of the specific responsibilities of the NCMEs is that they meet JCAHO's functional standards of patient and family education (Smith, Danforth, & Owens, 1994).
Referral (6b8100)	Arrangement for services by another care provider or agency.	The CM contacted community resources to determine what services would be available (Strong, 1991).
Physician Support (6a7710)	Collaborating with physicians to provide quality patient care.	The CM collaborated on a daily basis with the patient's physician(s) (Parkman & Loveridge, 1994).

Figure 4 Continued.   Same Title.

Health System and Behavioral Domains. Four of the 41

interventions were present in greater than 50% of the

documents: Health Care Information Exchange: Within Agency;

Admission Care; Surveillance; and Critical Path Development.

These four interventions plus, five other interventions,

represented the common nursing case management interventions

in at least 33% of the documents analyzed.

CHAPTER 5

DISCUSSION

The results of this study are discussed in this final

chapter.   The results are presented and related to previous

research.   Limitations of the study are also discussed.

Finally, implications for practice and recommendations for

further research are presented.

Discussion

The major findings of this study support the intended

use of the NIC taxonomy to classify nursing interventions

performed by all nurses no matter what their setting or

specialty, including NCMs. The activities performed by

nurse case managers were classifiable into the intervention

classes and domains of the NIC taxonomy. Nine interventions

were found to be commonly practiced by nurse case managers

in thirty different settings. The results of the survey of

perioperative nurses, another unique group, similarly

demonstrated that a group of interventions can be identified

as common to or the core interventions of a specialty

nursing practice (Steelman, Bulechek, & McCloskey, 1994).

Another important finding of this study was that the
interventions coded were similar to the components of
nursing case management practice described in earlier
research. Rothman (1992) identified the following
components as core to case management practice: assessment,
planning, coordination, monitoring, and advocacy. In this
study, these components were coded respectively as:
Admission care, Critical Path Development, Health Care
Information Exchange, Surveillance, and Patient Rights
Protection. Nursing case manager actions described by
McKenzie, Torkleson, and Holt (1989) are also similar to the
interventions coded in the sample documents in this study.
The actions described by McKenzie et al. were: developing a
critical path, meeting the patient in pre-admission,
explaining the plan of care, providing hands-on care,
monitoring daily care, reviewing the critical path,
collaborating with the physician, observing for redundant
orders, communicating variance, and coordinating discharge
needs. These actions are similar to the following
interventions coded in this study: Critical Path
Development, Admission Care, Surveillance, Physician

Support, and Discharge Planning. Some of the actions are combined in an intervention. For example, Critical Path Development includes: developing and reviewing the path, explaining the plan to the patient, and communicating variance.

In addition, the findings from this study are consistent with research that delineated nurse case manager actions in non-hospital settings. Rogers, Riordan, and Swindle (1991) described actions performed by nursing case managers in a community-based model. The actions they described were similar to the interventions coded in this study of hospital-based nurse case managers. Likewise, the actions performed by psychiatric nurse case managers (listening and teaching) in Van Dongen and Jambunathan's (1992) pilot study are similar to the interventions coded for hospital-based nurse case managers. This study supports these previously identified nursing actions as nursing case management interventions.

The overall findings provide support for the use of the NIC taxonomy as an instrument to document nursing case management interventions. The taxonomy provided the

standardized language needed to describe and evaluate

nursing case management practice across settings.

The eight interventions that occurred in only one

setting is not surprising due to the program variability in

nursing case management. Nursing case management programs

have been designed to meet the unique needs of the

particular institution. The nurse case manager performs

those interventions that are necessitated by their

institution. This finding is consistent with common wisdom

regarding variety in nursing case management programs that

has been reported in the literature (Bower, 1992; Brault &

Kissinger, 1991; Giuliano & Poirier, 1991; Molloy, 1994;

Raiff & Shore, 1993).

An interesting finding in this study was the number of

advanced practice nurses (Nurse Practitioners and Clinical

Nurse Specialists) performing the role of nurse case

manager. This finding is consistent with Lamb's (1995)

statement that there is a growing trend to prepare nurse

case managers at the graduate level. No attempt was made to

differentiate interventions based on the educational

preparation of the nurse case manager but the topic would be an excellent future research study.

Equally interesting is the finding that in nine programs the direct care or bedside nurse performed the nurse case manager role in addition to direct care responsibilities. In this study no attempt was made to differentiate nursing case management interventions from other nursing interventions. All interventions performed by the nurse case manager were considered nursing case management interventions. Future research should be directed at exploring the relationship between the role structure of the nurse case manager and the interventions they implement.

<center>Limitations</center>

The results of this study must be interpreted with consideration of the study limitations. A criterion-based sample of moderate size was employed. Therefore, the possibility of selection bias influencing the findings must be considered. However, the data suggest that the characteristics of the sample reflect the variation present

in nursing case management programs reported in the
literature.

Because the interventions were coded by two coders with
a nursing case management background, it is possible that
shared bias could have entered into this study.
Conceivably, the phrases and sentences (context units) in
the documents could have been assigned different meanings by
an investigator without case management knowledge.

The findings of this study were also limited by the
lower intercoder agreements at time one and time three due
to disagreements regarding the semantic content identified
as a NCM action or behavior. The investigator could have
established a two-level intercoder agreement assessment to
strengthen the reliability of the design. The first level
could have assessed agreement on identifying NCM actions and
behaviors in the documents. The second level could have
assessed agreement on the codes assigned to the actions and
behaviors.

Data on all of the nursing interventions implemented by
direct care nurse case managers were not collected, due to
omission of this information in the documents studied.

Consequently, the number and distribution of interventions did not reflect the entire practice of these hospital-based nurse case managers, only those interventions reported within the page limitation policies of the documents under study.

Recommendations

Future research is needed to validate the nursing case management interventions identified in this study. The research design could be replicated on the literature describing continuum and community based models of nursing case management. If the same or similar nursing case management interventions were identified in other settings this would validate the common interventions identified in this study.

The newly developed NIC survey could also be administered to nurse case managers to assess their use of interventions in practice. This survey became available from the Iowa Intervention Project in February 1996. The survey consists of the NIC intervention labels and definitions followed by a scale that asks the nurse to describe how frequently they perform the interventions. A

survey of nurse case managers would identify which of the interventions they perform as well as how frequently they are performed. The results of such a survey would also validate the nursing case management interventions identified in this study.

Summary

In summary, this study provided support to the use of the NIC taxonomy as an instrument to document nursing case management interventions. Based on a content analysis of 30 documents published between 1990 and 1995, forty-one different nursing case management interventions were identified and coded utilizing the NIC taxonomy. Nine common interventions were identified for this sample. These interventions were: Critical Path Development, Surveillance, Admission Care, Health Care Information Exchange: Within Agency, Quality Monitoring, Discharge Planning, Teaching: Individual, Referral, and Physician Support. Future research in the area of nursing case management interventions is needed to lend support to these findings and to validate the results of this study.

APPENDIX A

Recording Instructions

1. Read the entire document.

2. Read the document a second time. Underline all nursing case manager (NCM) actions, behaviors, and treatments in pencil. (Do not underline generic NCM actions, behaviors, and treatments described in the introductory paragraphs unless they specifically describe the actions, behaviors, and treatments performed by the NCM in the program under discussion).

3. Underline duplicate actions, behaviors, or treatments and identify them as duplicates by writing ''repeat''.

4. If a sentence contains more than one action, behavior, or treatment separate them with a slash and code each separately.

5. After all actions, behaviors, and treatments are underlined, turn to pages 58 through 68 in the Nursing Interventions Classification (NIC), Second Edition.

6. Locate the Level 3 Intervention that best describes the action, behavior, or treatment.

7. Write down the six digit intervention taxonomy number in the margin of the document next to the phrase or sentence it applies to. For example, 1A0140 = Body mechanics promotion located in the Activity and Exercise Management Class in the Physiological: Basic Domain. Enter 1A0140 in the margin. **Please write small and legibly.**

8. If there is a question as to what intervention an activity or behavior implements, look up the activity/behavior in the alphabetical listing of interventions in Part Three, pages 71 to 602. The listing provides a definition of the intervention, the intervention number, and examples of activities. Match the recording unit (action, behavior, treatment) with the most appropriate intervention.

9. In this study assessment is not a separate intervention. It is included in either Admission Care or Surveillance.

10. Case management plan and critical pathway are considered synonymous terms for purposes of this study and should be coded as such.

11. For interventions not listed -- assign a sequential four-digit number in the appropriate class and domain.

12. Code each cross-referenced intervention with the numbers from the primary class.

13. Identify all references to the nurse case manager performing direct or bedside care with an asterisk in the adjacent margin.

14. When you having finished coding all interventions identified place your initials in the upper right-hand corner of the document under the Sampling unit number.

15. When all activities, behaviors, and treatments have been coded the codes from the margins of the document will be entered into the database program ''askSam, version 3.0'' by the investigator. Each code or recording unit will comprise a data field. The context unit, phrase or sentence, that describes the nursing case management intervention (identified code) will be entered after the code field.

16. In addition, the following information will be entered in data fields for each document: the sampling unit

number (from upper right-hand corner of the document), the names of the author(s), title of the document, journal from which the document was obtained, the year of the document, the setting, and identification of who performed the NCM role. The data field ''NOTES'' is used to describe whether the case manager engages in direct patient care in addition to the interventions coded previously. Other comments about the document can also be entered in this field.

17. Write the word ''Posted'' in the lower right-hand corner of the document after the codes have been transferred to the database.

18. Repeat the entire process on another document until all 30 documents have been analyzed.

APPENDIX B

DOCUMENTS EXCLUDED FROM SAMPLE

The following documents were excluded from the sample the reasons indicated.

Bejciy-Spring, S. M. (1991). Nursing case management: Application to neuroscience nursing. Journal of Neuroscience Nursing, 23, 390-397. Theoretical program, not actual practice.

Christensen, P. & Bender, L. H. (1994). Models of nursing care in a changing environment: Current challenges and future directions. Orthopaedic Nursing, 13(2), 64-70. Specific actions and behaviors of NCM not described.

Daly, B. J., Phelps, C., & Rudy, E. B. (1991). A nurse-managed special care unit. Journal of Nursing Administration, 21(7/8), 31-38. Duplicate article by author group describing the same program.

Elizondo, A. P. (1994). Nursing case management in the neonatal intensive care unit. Part 1: Pioneering new territory. Neonatal Network - Journal of Neonatal Nursing, 13(8), 9-12. Theoretical program, not actual practice.

Fox, S., Ehreth, J., & Issel, L. M. (1994). A cost evaluation of a hospital-based perinatal case management program. Nursing Economics, 12, 215-220. Specific actions and behaviors of NCM not described. Article described how to determine program costs.

Gardner, M. (1992). Nursing case management a model for care delivery. ANNA Journal, 19, 156. Theoretical program, not implemented at time of publishing.

Gerber, L. S. (1994). Case management models: Geriatric nursing prototypes for growth. Journal of Gerontological Nursing, 20(7), 18-24. Document included community-based nursing case management.

Gibson, S. J., Martin, S. M., Johnson, M. B., Blue, R., & Miller, D. S. (1994). CNS-directed case management. Cost and quality in harmony. Journal of Nursing Administration, 24(6), 45-51. Document included community-based nursing case management.

Harrigan, R. C. (1995). Health care reform: Impact of managed care on perinatal and neonatal care delivery and education. Journal of Perinatal & Neonatal Nursing, 8(4), 47-58. Theoretical program described in document.

Higgins, J. M., Ponte, P. R., James, J. R., Fay, M., Madden, M. J. (1994). Restructuring the CNS role for a managed care environment. Clinical Nurse Specialist, 8, 163-166. Document provided a role description not nurse case manager activities and behaviors.

Ison, A. (1991). Nursing case management: An innovative approach to care in the emergency department. Topics in Emergency Medicine, 13(3), 35-46. Theoretical program described.

Kanter, J. S. (1991). Integrating case management and psychiatric hospitalization. Health and Social Work, 16(1), 34-42. Theoretical program described.

Lajeunesse, D. A. (1990). Case management: A primary nursing approach. Caring, 9(8), 13-16. Community-based nursing case management described in document.

Mackety, C. J. (1990). Lasers in urology. Nursing Clinics of North America, 25, 697-709. Theoretical program described.

Mandeville, L. K., Erickson, S., & Spinella, J. (1995). Establishing an obstetric case management model. The Journal of Perinatal and Neonatal Nursing, 8(4), 13-22. Community-based nursing case management program described.

Moss, M. T. (1994). Nursing tools: A global perspective . . . three tools form a triangular analytical instrument, outcomes management, case management and critical pathways. Nursing Management, 25(6), 64A-B. Specific nurse case manager activities and behaviors not described.

Neidig, J. R., Megl, M. E., & Koehler, K. M. (1992). The critical path: An evaluation of the applicability of nursing case management in the NICU. Neonatal Network - Journal of Neonatal Nursing, 11(5), 45-52. Document provided justification to start nursing case management program not specific activities and behaviors.

Norris, M. K. & Hill, C. (1991). The clinical nurse specialist: Developing the case manager role. Dimensions of Critical Care Nursing, 10, 346-353. Theoretical program described.

Nugent, K. E. (1992). The clinical nurse specialist as case manager in a collaborative practice model: Bridging the gap between quality and cost of care. Clinical Nurse Specialist, 6, 106-111. Theoretical program described.

Oleson, M. & King, T. W. (1990). Back to the beginning: Nursing case management of the older client with alaryngeal speech needs. Journal of Gerontological Nursing, 16(12), 27-29. Theoretical program described.

Pins, C. L. & Swanson, M. E. (1993). A suburban community emergency department's adaptation of case management. Journal of Emergency Nursing, 19, 503-509. Specific nurse case manager activities and behaviors not described.

Rudy, E. B., Daly, B. J., Douglas, S., Montenegro, H. D., Song, R., & Dyer, M. A. (1995). Patient outcomes for the chronically critically ill: Special care unit versus intensive care unit. Nursing Research, 44, 324-331. Document describes program reported in other articles.

Sinnen, M. T. & Schifalacqua, M. M. (1991). Coordinated care in a community hospital. Nursing Management, 22(3), 38-42. Document described critical paths, not nursing case management.

Smith, G. B. (1994). Hospital case management for psychiatric diagnoses: Focusing on quality and cost outcomes. Journal of Psychosocial Nursing & Mental Health Services, 32(2), 3-4. Theoretical program described.

Smith, P., Pass, C. M., Pounovich-Stream, C., & Jones, B. (1992). Implementing nurse case management in a community hospital. MEDSURG Nursing, 1, 47-52. Duplicate article by author group.

Smith-Rooker, J. L., Garrett, A., & Hodges, L. C. (1993). Case management of the patient with pituitary tumor. MEDSURG Nursing, 2, 265-274. Theoretical program described.

Sowell, R. L. & Meadows, T. M. (1994). An integrated case management model: Developing standards, evaluation, and outcome criteria. Nursing Administration Quarterly, 18(2), 53-64. Program described was not hospital-based.

Sperry, S. & Birdsall, C. (1994). Outcomes of a pneumonia critical path. Nursing Economics, 12, 332-339. Document described the critical path, not nurse case manager activities and behaviors.

Sterling, Y. M., Noto, E. C., & Bowen, M. R. (1994). Case management roles of clinicians: A research case study. Clinical Nurse Specialist, 8, 196-201. Document described activities of nurse case managers as well as social work case manager.

Tahan, H. A. & Cesta, T. G. (1994). Developing case management plans using a quality improvement model. Journal of Nursing Administration, 24(12), 49-58. Document described case management plans, not nurse case manager actions and behaviors.

Windle, P. E. (1994). Critical pathways: An integrated documentation tool. <u>Nursing Management, 25</u>(9), 80F-L. Document provided a description of critical pathways.

APPENDIX C

CONTEXT UNIT REPORTS

INTERVENTION CONTEXT UNIT REPORTS

1B1876 Tube Care: Urinary

DEFINITION: Management of a patient with urinary drainage equipment.

Sample #	Context Unit
25	An example of a medical care intervention is foley catheter care.

2J2880 Preoperative Coordination

DEFINITION: Facilitating preadmission diagnostic testing and preparation of the surgical patient.

Sample #	Context Unit
10	The nurse (CM) meets the patient at the hospital three to five days before the procedure, combining necessary diagnostic procedures with . . .
11	. . . the NCM . . . coordinated the entire admission process . . .
25	. . . and answer any specific questions the patient and his family may have.

2J5610 Teaching: Preoperative

DEFINITION: Assisting a patient to understand and mentally prepare for surgery and the postoperative recovery period.

Sample #	Context
10	The nurse (CM) meets the patient at the hospital three to five days before the procedure, . . . with patient and family education.
11	The preadmission visit was concluded with a tour of the ICU and waiting areas.
25	. . . and the preadmission testing staff to provide patient and family education concerning the procedure and what to expect during and after hospitalization. . . . provides preoperative teaching, . . . reinforces postoperative teaching with the patient and family. Written discharge instructions also are reviewed.

304410 Mutual Goal Setting

DEFINITION: Collaborating with patient to identify and prioritize care goals, then developing a plan for achieving those goals through the construction and use of goal attainment scaling.

Sample #	Context
2	The CM establishes mutual goals with the patient as the basis for the nursing care plan . . .
13	Goals set by the health care team focused on both the patient and family. Multidisciplinary interventions and resources required by the patient and wife in meeting their goals were coordinated by the CM.
29	The PNCM establishes goals with the patient and begins a long-term ''caring'' relationship.

30 During the assessment process, the nurse (CM) works with the patient and family to mutually determine problems, strengths, and the needs of the patient.

3Q4920 Active Listening

DEFINITION: Attending closely to and attaching significance to a patient's verbal and nonverbal messages.

Sample # Context

3 Through careful listening and open communication the hospital CM and other team members assisted the parents to proceed at their own pace in assuming the management of Bobby's care.

3Q4430 Play Therapy

DEFINITION: Purposeful use of toys or other equipment to assist a patient in communicating his/her perception of the world and to help in mastering the environment.

Sample # Context

3 Psychological support was provided through therapeutic play and the presence of his parents.

3R5210 Anticipatory Guidance

DEFINITION: Preparation of patient for an anticipated developmental and/or situational crisis.

Sample #	Context
3	Names and telephone numbers of contact people in agencies included in Bobby's plan were given to his parents. Information about other resources that they might wish to use later, such as day care services, was also given. Potential problems, ways the home environment would be different from the hospital, problem solving strategies, coping strategies and 24-hour assistance were discussed.
6	Each patient is given a card with the name and phone number of the CM and is encouraged to contact the CM with any questions or problems while hospitalized and after discharge.
7	But she (the NCM) did explain that a nurse would be his guide throughout the treatment process- listening to his questions, keeping him informed, telling him what to expect.
12	The CM role has allowed orthopaedic patients to have an identified individual whom they can contact at any time during their episode of care.
28	To prevent needless emergency department visits, the CM established a method by which the patient could call concerning care-related issues.

3R5230 Coping Enhancement

DEFINITION: Assisting a patient to adapt to perceived stressors, changes, or threats which interfere with meeting life demands and roles.

Sample #	Context
3	CMs decide with the child's parents how the flow of information will be managed so that the parents are comfortable with the way information is provided. In most instances controlling this one issue reduces or eliminates a large amount of stress for parents.
19	. . . the CM evaluates all first-time and breast-feeding mothers thoroughly to ensure that all education opportunities are maximized and the postdischarge plan is clearly understood.
24	. . . the plan of care was revised and priorities were altered to provide continued supportive care of Mrs. P and assistance for the family in coping with these events.
30	The intervention of the NCM helps the family to cope and learn how to deal with the sick family member.

3R5250 Decision-Making Support

DEFINITION: Providing information and support for a patient who is making a decision regarding health care.

Sample #	Context
20	Assisting patients and caregivers to make informed decisions based on patient's needs, abilities, resources, and personal preferences.

24   Important elements of this support included frequent sharing of information, consistency and honesty about the patient's prognosis and limited chances for recovery, and frequent visitation by the family in CT-ICU.

30   Being a patient advocate is one of the most important roles of the CM because many of these patients need guidance to make wise health care decisions. The CM educates and assists patients with communication and an understanding of the health care issues, such as explaining procedures, tests, and the necessity for them.

3R5270 Emotional Support

DEFINITION: Provision of reassurance, acceptance, and encouragement during times of stress.

Sample #   Context

3   The parents were encouraged to express their fears, doubts, and hopes openly with the hospital CM and other trusted team members.

3S5566 Parent Education: Childrearing Family

DEFINITION: Assisting parents to understand and promote the physical, psychological, and social growth and development of their toddler, preschool, or school-aged child/children.

Sample #   Context

3   Possible ways that Bobby might react following discharge were discussed with the parents.

3S5602 Teaching: Disease Process

DEFINITION: Assisting the patient to understand information related to a specific disease process.

Sample #	Context
6	. . . home blood glucose monitoring, modes of diabetes control, foot care, health maintenance habits, sick-day management, timing of medications and meals, and strategies for coping with chronic diabetes.
7	The nurse (CM) took the opportunity to begin educating them both about pneumonia and the expected recovery course.
22	. . . the CNS proceeds at the pace set by the parents to teach them about myelomeningocele and care specific to their child.
30	The ventilator-dependent child needs to have the family educated to the disease process . . .

3S5606 Teaching: Individual

DEFINITION: Planning, implementation, and evaluation of a teaching program designed to address a patient's particular needs.

Sample #	Context
3	The hospital CM, responsible for the bulk of the discharge teaching, was notified as each team member accomplished a linking to a program.

6   The CM . . . also functions in the role of the diabetes educator . . . Each patient receives written, individualized educational materials. The teaching is highly personalized, with special attention to the literacy and comprehension levels of the patient.

7   By using the CP as a teaching tool, we keep the patient involved as an active participant in the course of treatment. . . . The patient teaching flowsheet-referenced each day in the CP-is a detailed guide to the teaching needed for patients with pneumonia.

10   And it gives the nurse (CM) more opportunity to educate patients and families than ever before.

12   She (the NCM) functioned as educator . . .

14   Patient and family teaching.

20   . . . individualized teaching to allow for optimal level of self-care and care by significant others.

21   Other responsibilities of the NCME include patient and family teaching . . . One of the specific responsibilities of the NCMEs is that they meet JCAHO's functional standards of patient and family education. The NCMEs are responsible for providing instructions on procedures that each patient may receive.

22   The CNS provides for ongoing education of the client, family, and significant others.

23   The functions of the NCM were defined and included the following: (1) patient and family teaching, . . .

28   Before discharge, the CM reviewed, for the final
            time, the discharge instructions with the patient
            and family members.

30   . . . have the family educated to . . . the
            direct care, the community resources, and the
            support systems in the community in order for the
            family to function effectively with this child in
            the home.

3S5616 Teaching: Prescribed Medication

DEFINITION: Preparing a patient to safely take prescribed
medications and monitor for their effects.

Sample #   Context

3   . . . the pediatric nutrition nurse clinician
            (CM) responsible for teaching Bobby's parents
            about how to provide the total parenteral
            nutrition after discharge.

6   . . . self-insulin injections . . .

4V6650 Surveillance

DEFINITION: Purposeful and ongoing acquisition,
interpretation, and synthesis of patient data for clinical
decision-making.

Sample #   Context

1   The NCM concurrently monitors patient care while
            the patient is in the hospital.

2   . . . the CM and/or CNS requests . . .
           documentation that is requests through nursing
           orders the relevant patient response
           documentation that is required as the basis for
           evaluation of care and progress toward goals.

3   Once the plan was developed, the hospital CM
           followed-up and monitored how providers were
           implementing the plan. Coordination of providers
           and agencies is one of the essential functions of
           the CM.

10   The CM reviews the care map at least twice a day
           during the hospital stay to verify that all
           activities are being conducted as planned.

11   . . . and followed the patient and family
           throughout the entire acute-care episode. . . .
           the CCM ensured that potential or actual problems
           were addressed and the clinical progress could be
           monitored and compared to the patient's
           preoperative baseline status.

12   The CM discerned patient problems and trends that
           negatively impacted patient's progress, and
           communicated these issues to the residents,
           nursing staff, other disciplines, and other
           services.

16   In such cases the CM will monitor the care of the
           patient and create an individual plan to maximize
           goals achievement within appropriate time
           resource constraints.

18   . . . as well as assuming accountability for the
           patient achieving those outcomes within
           established standards, appropriate time frames,
           and with utilization of effective resources.

19   The CM oversees the care of mothers and neonates
        to ensure that discharge is accomplished within
        designated time frames utilizing appropriate
        resources. Currently the CM visits the family,
        who are considered an early discharge, within 24
        to 72 hours of leaving the hospital.

20   Monitoring of the care plan to ensure appropriate
        and cost effective actions. Monitoring of
        patient progress toward goal achievement.
        Revision of care plan, as needed.

21   . . . managing resources for all patients on an
        assigned unit, facilitating patient care
        services, . . .

22   The CNS continually monitors and evaluates how
        the child and family respond to interventions and
        how they progress toward the established goals.

23   . . . (2) monitoring resource facilitation and
        utilization

24   The CM met daily with the nursing staff to review
        the CMP and to evaluate the patient's progress.
        In addition to daily consultation with the
        nursing staff, the CM and other team members met
        weekly during CV CM rounds to discuss and
        evaluate Mrs. P's care.

25   . . . assessment of the patient and family's
        response to the surgery, . . . At discharge, the
        NCM reviews voiding status . . .

26   The CM continued to review charts daily and
        assist nursing staff with goals setting.
27   . . . CM on an interdisciplinary team responsible
        for coordinating and tracking the care of
        children hospitalized for diagnostic evaluation
        or therapeutic management of heart disease.

30   The NCM constantly monitors, tracks, assesses,
            and evaluates the quality of care.

4V6680 Vital Signs Monitoring

DEFINITION: Collection and analysis of cardiovascular,
respiratory, and body temperature data to determine and
prevent complications.

Sample #   Context

25   Examples of a nursing care intervention are
            frequency of vital signs . . .

5X7040 Caregiver Support

DEFINITION: Provision of the necessary information,
advocacy, and support to facilitate primary patient care by
someone other than a health care professional.

Sample #   Context

3   The hospital CM gradually and continually kept
            the parents informed as progress was made
            concerning Bobby's discharge plan.

24   . . . and to prepare the family to assume
            responsibility for Mrs. P's ongoing care.

5X7110 Family Involvement

DEFINITION: Facilitating family participation in the
emotional and physical care of the patient.

Sample #   Context

5   On the third day following admission, the CM held
            a family conference which included the social
            worker and the patient's mother and sister.

24   Assisting the nursing staff to prepare the family
        to assume care functions as discharge approached.

28   . . . the CM facilitated communication through
        the use of telephone or written messages with
        family members to ensure consistency with therapy

30   The NCM prepares, teaches, and actively engages
        the patient and family to be responsible and to
        take control of their health care needs.

5X7140 Family Support

DEFINITION: Promotion of family values, interests, and
goals.

Sample #   Context

5   Under the leadership of the CM, the neurosurgery
        interdisciplinary health care team worked to
        assist Mr. G in achieving (the family's) goals.

24   The critical care nursing staff, surgeon, and CM
        provided family support. Family support became a
        crucial issue this time. The collaborative,
        consistent approach established by the surgeon,
        CM, . . . enabled the family to understand that
        although the care environment as well as the
        bedside critical care providers had changed, the
        plan of care did not.

28   An important function of the CM is communication
        of information. During this phase, facilitating
        family contact and keeping the family up-to-date
        on the patient's progress assisted in building
        the foundation for open dialogue. Realistic
        expectations and planning began to unfold at this
        time.

30   The family of the ventilator dependent child does not feel alone because the CM is there for reinforcement, education, support, and guidance.

6Y7310 Admission Care

DEFINITION: Facilitating entry of a patient into a health care facility.

Sample #   Context

1   Case management is implemented when a patient is admitted to the hospital.

2   . . . CM may complete the current status admission assessment.

4   . . . the CM goes to the unit where the patient is at the time, meets with the patient, . . . explains the purpose and operations of the SCU to the patient and family, gives the family a tour of the SCU, if possible, takes a thorough history, and initiates a beginning CMP.

6   The new patients are interviewed, and baseline assessments are made by the diabetologist and CM on a 24-hour basis, excluding weekends.

7   . . . listening to a nurse (CM) explaining a treatment schedule for his pneumonia and telling him how he could expect to progress.

10   When scheduled for a procedure, a patient receives much of this information from the physician's office staff and is then contacted by the nurse who will be the CM.

12   . . . the CM assisted with histories and physicals during a time of low staffing in the preadmission area.

14   The CM's role . . . included: 1) preadmission
            patient contact on scheduled admissions, 2) early
            discharge planning in collaboration with the
            discharge planning staff . . . and 3) assessment
            and planning with the patient and family.

15   RN CMs do the initial evaluation.

17   Completes an assessment of patient and family
            capabilities and needs prior to or at the time of
            admission to the unit.

19   On admission of a patient to the labor and
            delivery or postpartum unit the CM initiates the
            protocol.

20   Patient assessment to identify needed services.

21   The NCMEs use their clinical expertise in
            assessing the patient's and family's current risk
            factors associated with the patient's admission.

22   During the assessment component of the NCM
            process, the CNS does a comprehensive evaluation
            involving the child's physical health status, the
            family's functional capability, and the family's
            psychosocial status, including personal and
            community support systems, financial resources,
            and home environment conditions.

24   . . . the CV CM admitted Mrs. P to her caseload.

25   During this visit, one of the urology NCMs meets
            the patient . . . initiates the patient's nursing
            history and CarePlan MAP.

28   The CM's responsibility during the initial
            resuscitation was to ensure that a complete
            assessment, planning, and coordination of care
            occurred.

30   The NCM then telephones the patient or the
            patient's family to do the initial assessment.
            If the admission is not elective, NCMs do their
            initial assessment within 24 hours of the
            hospital admission to evaluate the patient,
            family, and home situation.

6Y7370 Discharge Planning

DEFINITION: Preparation for moving a patient from one level
of care to another within or outside the current health care
agency.

Sample #   Context

2   This shifted accountability and responsibility
            for the nursing care portion of the discharge
            planning proceeds from a centralized RN discharge
            planner to the CM.

3   . . . to discuss Bobby's discharge needs with his
            parents, and plan and coordinate the discharge
            teaching for Bobby's family and their support
            system.

6   Clinic appointments are scheduled at the time of
            discharge.

14   Consultation with discharge planning staff.
            Coordination of discharge plans.

20   Initiation of discharge plan at admission and
            facilitation of that plan with other health care
            professionals.

21   . . . and discharge planning in collaboration
            with the physician and social services.

24	The CM considered eventual placement in a rehabilitation center, intermediate care facility, or nursing home. . . . the CV CM explored the feasibility of home care.
25	. . . and discharge planning.
26	. . . discharge planning was instituted sooner.
27	. . . and evaluating discharge readiness.
28	The Social Services consult reconfirmed the delivery of the hospital equipment for the following day. Prevention of prolonged hospitalization was accomplished by the CM overseeing these final details.
30	Discharge planning will begin either pre-admission or upon admission to the hospital.

6Y7400 Health System Guidance

DEFINITION: Facilitating a patient's location and use of appropriate health services.

Sample #	Context
20	. . . identification of a CM for each patient to act as an advocate and liaison with the health care community
21	. . . the NCMEs are liaisons between the patient and family and all other health care providers/services.
22	The CNS or social worker gives the parents a tour of the clinic areas and a thorough description of what will go on during their clinic visits. The CNS/CM's major role is to provide and plan for ongoing care delivery.

28   Coordinating orthopaedic and general surgery
            clinic visits at the same time minimized the
            unnecessary depletion of the patient's energy
            resources.

30   This involves providing additional information
            and education of hospital and community services
            to the patient and the family.

6Y7410 Insurance Authorization

DEFINITION: Assisting the patient and provider to secure
payment for health services or equipment from a third party.

Sample #   Context

3   It was important to have the insurance company
            present in order for the health professionals and
            Bobby's parents to learn what expenses the
            insurance would cover.

21   The NCMEs must be familiar with third party
            reimbursement, the prospective payment system,
            and managed care procedures in order to contain
            cost and use resources efficiently.

6Y7460 Patient Rights Protection

DEFINITION: Protection of health care rights of a patient,
especially a minor, incapacitated, or incompetent patient
unable to make decisions.

Sample #   Context

7   She'd also be his advocate, conveying his
            feedback to the interdisciplinary health care
            team brought together to meet his specific needs.

20   . . . identification of a CM for each patient to
            act as an advocate.

21   The NCMEs advocate for the patient by pursuing
            and obtaining appropriate and timely patient care
            services.

22   Often, the CNS must advocate for the child in the
            areas of funding and educational programs.

24   Following a lengthy consultation with the family,
            CM, and surgeon, it was decided to not initiate
            further therapy and to gradually withdraw all but
            supportive therapy, including mechanical
            ventilation. The CV CM met with the nursing
            staff to discuss the changes in the plan of care
            and to assist the staff in meeting the family's
            needs.

26   Ethical issues, such as withdrawal of treatment,
            were clarified by encouraging the patient and
            family to communicate their desires and goals of
            treatment with their physician.

29   . . . and functions as a . . . patient advocate
            as the need arises.

30   During the implementation phase, the NCM acts as
            a patient advocate.

6a7640 Critical Path Development

DEFINITION: Constructing and using a timed sequence of patient care activities to enhance desired patient outcomes in a cost-efficient manner.

Sample #   Context

1   . . . critical pathways for the 10 DRGs that had the highest volume of hospital admission were developed by the NCM.

3   The hospital CM . . . and family discussed all aspects of his treatment plan. This open, two-way communication insured that Bobby's plan would be implemented consistently.

4   Nursing interventions in the SCU are guided by . . . critical pathways developed by the SCU staff in consultation with the medical director.

6   . . . the CM assists the nursing staff in developing an individual plan of care for the patient.

7   Part of ''getting a patient on board'' is to go over the daily schedule, or critical pathway (CP), with him, as we did with Mr. Romero. . . . Developed by an interdisciplinary team . . . If care departs at all from what the CP calls for, she (the NCM) documents this as a variance.

8   Care paths describe typical events or activities that must occur on a daily basis to achieve desirable patient outcomes. . . . All members of the healthcare team . . . are involved in the creation and application of the care path.

9   A clinical pathway was developed for DRG 302 by
         the transplant team to display key elements of
         the established medical protocol. . . . The CNS
         CM tracked these variances, addressed problems
         amenable to concurrent intervention . . .

10   In developing these plans, the nurse works
         directly with the physician and personnel from
         all other departments involved in patient care .
         . . Mercy involves nurses and healthcare
         professionals throughout the hospital in
         developing the clinical pathways. . . . If
         anything is not marked as being completed, the CM
         takes immediate follow-up action . . .

11   . . . plans were jointly formulated using a
         critical pathway as a guide to track patient
         progress and to communicate the plan of care.

12   The CM has facilitated progress toward
         development of pathways to best manage trauma
         patient care.

13   Early problem identification began with the
         nursing staff and CM developing the patient's
         case management plan.

14   Initiation and individualization of patient
         outcome plan.

15   . . . follow critical paths as determined by an
         RN/MD panel . . .

16   From each discipline or department, a key person
         was identified to provide specific content
         expertise in the development of the path. . . .
         the CNS/CM . . . were involved in the development
         of this path. . . . Such variances are noted and
         tracked by the CM.

17   Facilitates patients' progress through
          established clinical care protocols by mobilizing
          resources and intervening as necessary to ensure
          that patient outcomes are achieved. Takes
          appropriate action when variances from clinical
          care protocols are identified. . . . The CCM
          initiates the clinical care protocol for the
          patient on admission to the ICU.

18   To begin the process, a chart review of all the
          pediatric craniofacial cases done . . . was
          completed. From this information, a critical
          pathway . . . was constructed for each
          classification. The case management plan is
          reviewed by the CM and the physician within the
          first 24 hours of admission.

19   Variances in expected length of stay are
          identified and analyzed. This allows the CM to
          take appropriate action when potential or actual
          problems in meeting outcomes are discovered.

20   Development and implementation of a plan of care
          through an interdisciplinary and collaborative
          team approach, including patient and family.

21   . . . the NCME is responsible for collaborating
          with physicians and health care team members in
          developing critical pathways to coordinate and
          guide patient care services. NCMEs are
          responsible for identifying clinical variances
          from the critical pathways . . .

22   . . . the CNS writes a service plan within Bureau
          for Children with Medical Handicaps (BCMH)
          guidelines.

23   . . . NCMs identified trends in care and
          developed clinical pathways for patients with
          five common medical-surgical diagnoses.

24   . . . and helped formulate a case management plan
            (CMP) using the CABG critical path. . . . These
            complications required immediate revision of the
            CMP to meet the patient's changing needs.

26   Critical pathways were developed by the CM to
            assist the nursing staff, but were not formally
            adopted by the team.

27   The PNP CM was also responsible for assessing and
            documenting variance from the critical pathway .
            . .

28   . . . a critical path was developed, forming the
            framework to guide delivery of care. Delays in
            implementing the various therapies and diagnostic
            tests were detected by the CM in the daily
            variances.

29   A collaborative action track (CAT) or critical
            path utilizes collaborative nursing diagnoses,
            outlines nursing and physician interventions in a
            timeline manner, and evaluates patient outcomes.

30   The CM manages the entire episode of illness in
            the hospital and coordinates the care in
            collaboration with the physician, the nursing
            staff, and all other health care professionals in
            the hospital . . . by critical paths.

6a7650 Delegation

DEFINITION: Transfer of responsibility for the performance
of patient care while retaining accountability for the
outcome.

Sample # Context

3   In the patient care conference, the
            responsibilities regarding Bobby's discharge were
            delegated to health team members (by the CM).

6a7710 Physician Support

DEFINITION: Collaborating with physicians to provide quality patient care.

Sample #	Context
4	The medical director reviews patients' progress each day, collaborates with the CM in planning, and is called for critical changes in the patient's condition and for necessary medication orders.
6	Inpatients are visited by both the CM and diabetologist, who both supervise their care.
12	Attendance at early morning resident rounds and x-ray conferences enhanced communication with physicians.
14	The CM also collaborated on a daily basis with the patient's physician(s).
15	. . . RN CMs worked with the physicians.
17	The recognition and collegial relationship that develops with physicians as they collaborate to achieve patient outcomes. . . . The CCMs and physicians mutually plan the ICU course for patients.
20	Collaboration with other health professionals to assure meeting patient needs.
21	NCMEs work with physicians in groups of three or four and on a one-on-one basis.
25	Each NCM works with a urologist, the urologist's office staff . . .

26   . . . the nurses were encouraged by the other
        team members to discuss goals of treatment,
        plans, and problems with attending physicians,
        using the CM for assistance.

28   The patient's laboratory data showed that the
        white blood count had returned to normal limits,
        although the hemoglobin and hematocrit decreased
        while the liver profile gradually increased. The
        CM communicated this information to the
        orthopaedic service.

6a7722 Preceptor: Employee

DEFINITION: Assisting and supporting a new or transferred
employee through a planned orientation to a specific
clinical area.

Sample #   Context

21   They (NCMEs) are responsible for planning,
        monitoring, and evaluating new employee
        orientation to the unit.

26   She (the CM) also spent time working with new
        nurses to develop their case management skills .
        . .

6a7800 Quality Monitoring

DEFINITION: Systematic collection and analysis of an
organization's quality indicators for the purpose of
improving patient care.

Sample #   Context

1   . . . the NCM also acts as quality assurance
        coordinator and utilization review nurse.

7   Once a patient has been discharged, the CM facilitator (a nurse) collects and collates the variance data from the completed critical pathways. . . . the aggregate data are the basis for continuous quality improvement.

8   . . . tracked to determine if care path or practice changes are needed.

9   . . . and stored the information in a database for future analysis. . . . Reduction in ALOS and total patient charges reflected efforts by the transplant team and CNS to examine the medical protocol closely and eliminate tests and diagnostic studies that did not demonstrate improvement in patient outcomes.

10   . . . documenting it on the quality management sheet for later review.

12   The CM identified the need for the acute unit to send patients to therapy on the day of discharge to the rehabilitation service, thereby decreasing the number of days the patient missed therapy.

16   Another role of the assigned CM is to analyze patterns of variance . . . and continuous quality improvement.

18   The effectiveness of the case management plan is evaluated as the CM reviews patient outcomes. Outcomes are discussed with the physician and other members of the health care team, including patients and families. Changes to the plan are made through a collaborative effort.

19   After discharge the CM completes a variance analysis tool.

20   Coordination of monitoring and evaluation of quality and appropriateness of care.

21   NCMEs are able to use variance trends to improve
            clinical outcomes and maintain quality.

26   The team is continuing to collect data on length
            of stay, cost, and patient satisfaction, and is
            exploring the use of other indicators to evaluate
            patient outcomes.

29   . . . functions as a risk manager.

30   . . . to promote the appropriate utilization and
            mobilization of resources for quality care and .
            . .

6a7829 Staff Education

DEFINITION: Developing and presenting formal education
programs or informal learning opportunities to staff
assigned to a specific clinical area.

Sample #   Context

1   Informal education sessions are ongoing as the
            staff continues to learn about public and private
            payment sources and how their requirements affect
            medical and nursing care.

20   Assistance with staff education.

21   . . . coordinating staff education on the unit .
            . . The NCMEs are responsible for providing or
            coordinating monthly inservices on assigned unit
            for all shifts.

28   . . . the CM educated the primary care providers
            on assessment skills which differentiate an
            intra-abdominal liver injury from chronic liver
            impairment.

6a7830 Staff Supervision

DEFINITION: Facilitating the delivery of high-quality patient care by others.

Sample #   Context

21   The NCMEs assure that all staff assigned to the unit are competent to provide the care needs for the patient population served.

26   . . . provided coordination for patients when a nurse from outside the unit was staffing.

6a7880 Technology Management

DEFINITION: Use of technical equipment and devices to monitor patient condition or sustain life.

Sample #   Context

28   The CM must see that antiembolic pneumatic boots and adequate respiratory care are implemented to avert potential complications.

6b7920 Documentation

DEFINITION: Recording of pertinent patient data in a clinical record.

Sample #   Context

2   Documentation is done primarily on one flowsheet . . .

3   This information was documented on the conference checklist and worksheets.

8   Variances to the care path are recorded by all
            team members . . .

10   During treatment, nurses and other healthcare
            professionals document when specific steps in the
            plan have been completed.

25   The NCM or staff nurse caring for the patient
            undergoing TURP signs the CarePlan MAP at the end
            of each shift. The NCM also documents goal
            achievement for the patient based on the nursing
            diagnoses.

26   A patient's functional outcomes were measured by
            the activities of daily living, mobility, and
            memory scales of the standardized rehabilitation
            scale, LORS III, which was completed by the staff
            nurse at the time of admission and discharge.

6b7960 Health Care Information Exchange

DEFINITION: Providing patient care information to health
professionals in other agencies.

Sample #   Context

3   To assure continuity if Bobby's hospital and home
            nursing care, the hospital CM made an agreement
            with the primary nurse from the home health care
            agency. The agreement was that Bobby's primary
            agency nurse would come to the hospital for
            several sessions to learn how Bobby's care was
            done.

5   . . . the neurosurgery CM assumed responsibility for coordinating and managing his care through collaboration with the neurosurgical health care team.

13   The hospital and community resources coordinated through the CM facilitated access to resources appropriate for the patient, led to the development of new resources for future blind clients, decreased fragmentation of services, and promoted collaboration between health care providers, the patient, and the patient's family.

15   . . . and collaborates with the post-hospital caregivers for follow-up care and consultation.

22   . . . the CNS will be the link between the patient and family and the appropriate service providers, including members of the myelomeningocele team and, even more importantly, providers within the child's home community . . .

29   . . . the PNCM . . . collaborates with multi-disciplinary healthcare team members . . .

30   The office nurse can give the CM feedback as to the progress of the patient at home. If home health nursing has been indicated, the CM can verify that the transition from hospital to home has gone well and to the satisfaction of the patient and/or family.

6b7961 Health Care Information Exchange: Within Facility

DEFINITION: Providing patient care information to health professionals within the facility.

Sample #	Context
1	Dialogue among the CM, nursing staff, and other disciplines is constant.
3	. . . hospital CM assumed responsibility for coordination of the team and communication.
4	. . . the CM directs the nursing care and coordinates the involvement of all other disciplines.
6	The CM consults with the emergency department daily to initiate new referrals.
9	The role of the CNS CM was to coordinate the multidisciplinary approach to patient care.
11	The CCM followed patients and their families daily and consulted with staff nurses providing direct patient care in both the intensive care and stepdown units.
12	. . . consulting with nursing and other disciplines. . . . the CM functions as an information resource for other services and disciplines.
14	Consultation with interdisciplinary team.
17	Supports the primary nurse through collaboration and role modeling in the planning, delivery, and evaluation of nursing care. The professional network that develops with other hospital departments supports and satisfies the CCMs as they effectively mobilize resources to meet patient needs.

19   The CM and the CNS collaborate to ensure that the
          expected interventions and outcomes are
          completed. The CM is able to assess patient's
          progress in meeting expected goals by
          collaborating with all members of the health care
          team and is able to intervene as necessary.

20   Provision of support to and serving as role model
          for nursing staff.

22   . . . case management involves physical therapy,
          occupational therapy, and the Children's Hospital
          early intervention team.

24   The CV CM and nursing staff identified immediate
          priorities and implemented strategies to promote
          the patient's survival. The CV CM coordinated
          care during Mrs. P's recovery by assuming a
          liaison role among the healthcare team members to
          ensure communication and evaluation of the
          patient's progress in relation to long-term
          goals.

25   . . . NCM who collaborates with the patient,
          family, physician, and the clinical team composed
          of nursing and other disciplines providing care.

26   The CM handled difficult and problematic
          interactions with patients and physicians or as
          requested by other team members.

28   Orchestrating the multidisciplinary team member's
          roles is a vital role of the CM. . . . one of
          the primary functions of the CM is to coordinate
          information.

6b7970 Health Policy Monitoring

DEFINITION: Surveillance and influence of government and organization regulations, rules, and standards that affect nursing systems and practices to ensure quality care of patients.

Sample #   Context

1   . . . in addition to working with Medicaid, Medicare, and insurance standards . . .

18   The CM will need to assume responsibility for developing patient care outcomes and revising standards.

21   . . . NCMEs must have up-to-date data on cost, length of stay, resource consumption based on DRG, procedures, and practitioners for assigned patient population.

28   The American College of Surgeons Committee on Trauma has developed outcome filters to assist the CM in auditing hourly/daily internal system variations within a level 1 trauma center.

6b8020 Multidisciplinary Care Conference

DEFINITION: Planning and evaluating patient care with health professionals from other disciplines.

Sample #   Context

3   To prepare for Bobby's discharge, his hospital CM and the CNS planned and conducted a patient care conference.

4   He or she presents the patient at the weekly interdisciplinary meetings, arranges family conferences as often as necessary . . .

6	Biweekly team meetings are held to help promote ongoing communication between the diabetes team health professionals.
12	An existing weekly multidisciplinary conference that included physicians was augmented by another weekly conference.
21	The NCMEs foster a collaborative practice environment by directing weekly team conferences on case-managed patients.
24	The surgeon, CM, and critical care nursing staff held frequent, consultative rounds at the patient's bedside to determine acceptable hemodynamic parameters, discuss appropriate therapies, and to evaluate the patient's response. . . . the CV CM held a patient care conference to inform these critical care nurses staff of the CMP.
26	It was decided that the team would meet daily and discuss for each patient the goals of treatment, special needs, accomplishment of specific tasks for the day, resolution of problems, and whether the patient still met criteria for continued hospitalization.

6b8100 Referral

DEFINITION: Arrangement for services by another care provider or agency.

Sample # Context

3	CMs refer early any families who do not have insurance coverage.
4	. . . obtains consultation from other disciplines . . .

5   The CM used pending Medicaid reimbursement to
        negotiate with a local home health agency for
        nursing assessments, physical therapy and medical
        social work services.

6   . . . the CM submits requests for these services
        the same day the assessment is made.

13   The first of many resources accessed by the CM
        was the . . . Resources to help control mounting
        financial expenses being accrued by the patient
        relating to housing and transportation needs were
        negotiated by the social worker and CM.

19   If the patient requires home tocolytic therapy,
        the CM coordinates this service.

22   The CNS works closely with the PHN to organize
        postdischarge care because these children often
        return to the hospital for surgery and acute
        illnesses.

24   The CM contacted community resources to determine
        what services would be available. The CV CM
        actively intervened to make timely nutrition and
        physical therapy referrals . . .

28   This outcome measure involved the CM arranging a
        social service consultation with the family for
        the following day. Referral for outpatient
        alcohol treatment is a valuable component of
        care, . . .

30   The CM will . . . refer to appropriate resources
        when necessary.

6b8120 Research Data Collection

DEFINITION: Assisting a researcher to collect patient data.

Sample #	Context
1	The NCM also acts as nurse researcher.
2	. . . every nurse completed daily data collection tools that incorporated components of the CM roles.
21	. . . as well as do research.

6b8140 Shift Report

DEFINITION: Exchanging essential patient care information with other nursing staff at change of shift.

Sample #	Context
7	At the change of shift, she (the NCM) uses the CP to report on the patient's status

6b8180 Telephone Consultation

DEFINITION: Exchanging information, providing health education and advice, managing symptoms, or doing triage over the phone.

Sample #	Context
3	. . . doing follow-up phone calls to his family after discharge. Follow-up phone calls at 24 and 72 hours post discharge to Bobby's family and the community team provided information to the hospital team . . .
11	The CCM contacted all patients by telephone two or three days after discharge.

14   Post-discharge follow-up phone call to
        patient/family.

19   . . . all patients receive telephone follow-up 24
        to 72 hours after discharge.

23   . . . (3) following-up after discharge.

26   A follow-up phone call was made 3 months later to
        rate the patient's functional status, number of
        readmissions to acute care, and place of
        residence.

30   After the patient has been discharged, the NCM
        contacts the patient and/or family by telephone
        and assesses the patient's condition and
        progress.

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[*] Denotes references included in the study sample.